The Croonian Lectures

ON

A NEW DEPARTURE IN CONNEXION WITH DIABETES.

Delivered at the Examination Hall, Victoria Embankment, June 26th,

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Specially reported for THE LANCET *and revised by the Author.*

LECTURE III.

QUESTION OF VALIDITY OF THE GLYCOGENIC DOCTRINE.

MR. PRESIDENT, COLLEAGUES, AND GENTLEMEN,—I reached at the end of the last lecture the consideration of the question of the validity of the glycogenic doctrine. Under this doctrine it is contended that the liver is saccharine to an extent that the other organs and tissues of the body are not; that the blood flowing *from* the liver is saccharine to an extent that the blood flowing *to* the organ is not; and lastly, that in the passage of blood through the systemic capillaries an abstraction or disappearance of sugar takes place. These constitute the main points in support of the glycogenic theory—the grounds upon which it is contended that the liver possesses a glycogenic function, and is thus made to hold a different position from the other organs and structures of the body. I placed before you a table in which the state of several organs and structures of the body was compared with the liver as regards composition in relation to sugar, and I showed you that sugar gave evidence of existing widely distributed throughout the body. I have never come across a tissue or texture of the body which I found to be free from sugar. I consider we may put it down that sugar is a general constituent of the component parts of the system, and naturally we should expect it to be a constituent of the liver as well as of the other organs and textures.

If we deal with the liver in such a manner as to obtain a representation of the condition belonging to life—if we treat it, that is to say, in such a manner that post-mortem change is not allowed to exert an influence upon it and to alter its constitution—we find that both as regards amount and nature of sugar the liver does not differ to the slightest extent from the other organs and textures of the body. From the tables placed before you at my last lecture (page 68) it was seen that on taking the liver so as to escape from the influence of post-mortem change the figures representative of the amount of sugar per 1000 stood in accord with the figures given for the other organs and textures of the body. Further, not only was there an agreement as regards the amount of sugar, but likewise as regards the character of the sugar. Glucose is a somewhat exceptional kind of sugar in the body. It is true, as we shall see, that glucose is the form of sugar ordinarily existing in the blood of the general circulation, but elsewhere instead of glucose we have a sugar possessing a lower cupric oxide reducing power, and the liver agrees with the other component structures of the body in this respect.

The table clearly showed that the liver taken at the moment of death does not contain glucose, but sugar, with a considerably lower cupric oxide reducing power. It further showed that when post-mortem change is allowed to exert its influence the kind of sugar found is, on the other hand, glucose. As the effect of post-mortem change the quantity of sugar after the lapse of a few minutes stood at about 12 per 1000 instead of from 1 to 2 or 3 per 1000 at the moment of death. On the following day the sugar had risen to 32 and 36 per 1000, and the kind of sugar found was practically glucose instead of one of lower cupric oxide reducing power.

SUGAR IN THE VENA PORTÆ COMPARED WITH THAT IN THE VENA CAVA.

To-day I have to proceed to the examination of the blood on the two sides of the liver—the blood flowing to the liver and the blood on the other side, or that which is flowing to and contained in the right side of the heart. Taking first the blood on the cardiac side of the liver, which may be spoken of as the blood of the general circulation, we shall find that very definite terms can be used in describing its condition in relation to sugar. It is a character belonging to this kind of blood that the amount of sugar under natural circumstances contained in it is only quite small and presents but little variation. I may formulate an expression and state that *the results of upwards of one hundred determinations of the amount of sugar present under natural conditions in various animals have shown a range of from about 0·6 to 1·0, or a little over 1·0 per 1000.* This I have confidence in placing before you as representing correctly the amount of sugar naturally existing in the blood of the general circulation. The cupric oxide reducing power of the sugar is such as to show that it consists of glucose, or mainly so; that is to say, the figures expressing the cupric oxide reducing power obtained before treatment with sulphuric acid, if not identical with, present a close proximity to, those obtained after treatment with the acid, which effects the conversion of other sugars into glucose. To obtain a truthful physiological representation the blood examined must be procured in such a way as to give a representation of the natural condition. Error has arisen from not observing the precautions which are requisite to obtain a representation of the blood in the natural state, like the error which has similarly arisen in the case of the liver.

To illustrate how necessary it is to give attention to the precise mode of collecting blood for examination, let me refer to the table before you showing the condition of the blood obtained at the moment of and shortly after death. The mode of conducting the experiment was this. A dog was suddenly killed by pithing, and instantly afterwards the chest was opened and the heart grasped with the hand at its base. A ligature was then applied above the hand, so as to retain the blood in the cavities of the heart. The heart was then excised by cutting above the ligature, to leave the blood in its cavities. With the removal of the heart the blood held back in the large vessels escaped into the chest and was afterwards dipped out. Two kinds of blood were thus obtained, the one consisting of blood taken as it were at the moment of death, the other of blood which had been allowed to become influenced by the post-mortem production of sugar in the liver. With the emptying of the vessels the blood from the liver would flow into the chest and carry with it the produced sugar

Blood at the Moment of and after Death.

Dog.	Sugar per 1000 expressed as glucose.	
	Before sulphuric acid.	After sulphuric acid.
Blood from the cavities of the heart ligatured and excised instantly after death	0·850	0·876
Blood afterwards collected from the chest ...	2·180	2·237

The details of the table show that whilst the blood detained within the cavities of the heart at the moment of death yielded 0·850 and 0·876 as the figures representative of the sugar per 1000 before and after treatment with sulphuric acid, the figures yielded by the blood collected afterwards amounted to 2·180 before and 2·237 after treatment with sulphuric acid.

The higher amount used to be taken as representative of the condition naturally existing during life. Such a condition, however, could not escape being accompanied with a large amount of sugar in the urine. Later I shall have occasion to refer in detail to a table showing the relation between the blood and urine in diabetes. Here it is sufficient for me to point to it and remark that a glance at it shows that such an amount of sugar as was formerly supposed to naturally exist in the blood during life means a strongly diabetic state of urine.

The sugar present in the blood of the general circulation stands, I consider, in the position of a constitutional ingredient. We have sugar existing everywhere in the body, and just as there is a certain amount of sugar in muscle, kidney, lung, pancreas, and brain, so a certain amount is present in the blood. Under the glycogenic doctrine a functional transport of sugar is assumed to take place from

the liver to the systemic capillaries. This I shall later show is incompatible with the state of urine that naturally exists.

THE PORTAL BLOOD.

Now let us look at the blood contained in the portal vein, and circumstanced so as to be subjected to the influence of food. The blood of the general circulation gives no evidence of being similarly influenced by food. The liver, in fact, which intervenes between the digestive system and the general circulation, keeps the sugar back. It is a notable feature in the case of the blood of the general circulation that the sugar remains of a definite small amount no matter what the nature of the food. A fluctuating condition, on the other hand, constitutes a special feature noticeably belonging to the portal blood. There is fluctuation in the one case and escape from fluctuation in the other, and it is the escape from fluctuation in the case of the blood of the general circulation which prevents the urine from becoming charged with sugar after each ingestion of food.

In the tabular representation before us the amount and nature of sugar found in the portal blood in a collection of instances after fasting and different kinds of food are shown. I may remark that all these instances were taken without any selection just as they happened to present themselves, and I consider they may be accepted as giving a reliable expression of the condition of the blood existing under the various circumstances. I need hardly tell you that precautions were taken to collect the blood in such a manner as to secure that a representation of the state naturally belonging to life was obtained:—

Portal Blood.

	Sugar per 1000 expressed as glucose.		
	Before sulphuric acid.	After sulphuric acid.	Cupric oxide reducing equivalent.
Fasting.			
Dog forty-eight hours after food	0·580	0·643	90
,, ,, ,, ,, ...	0·666	0·710	94
Rabbit twenty-four hours after food ...	1·583	1·733	91
,, ,, ,, ,, ...	2·454	2·499	98
,, ,, ,, ,, ...	2·244	2·244	100
After animal food.			
Dog few hours after food...	1·117	1·340	83
,, ,, ,, ...	0·893	1·087	82
,, ,, ,, ...	0·633	0·683	93
,, ,, ,, ...	0·593	0·660	90
,, ,, ,, ...	0·633	0·707	90
,, ,, ,, ...	0·750	0·776	96
,, ,, ,, ...	0·720	0·720	100
Cat ,, ,, ...	0·851	1·139	77
,, ,, ,, ...	0·675	0·779	87
After starchy food.			
Dog shortly after food	1·210	1·267	96
,, ,, ,, ...	1·183	1·477	80
,, ,, ,, ...	1·153	1·270	91
,, ,, ,, ...	0·977	1·100	89
,, ,, ,, ...	0·968	1·277	76
,, ,, ,, ...	1·723	2·187	78
,, ,, ,, ...	1·403	1·930	73
Rabbit few hours after food	2·587	3·234	80
,, ,, ,, ,, ...	2·346	2·878	82
,, ,, ,, ,, ...	1·630	2·085	78
,, ,, ,, ,, ...	2·109	2·903	73
,, ,, ,, ,, ...	1·451	1·816	79
,, ,, ,, ,, ...	3·665	4·102	89
,, ,, ,, ,, ...	4·690	5·330	86
,, ,, ,, ,, ...	4·070	4·690	87
,, ,, ,, ,, ...	1·461	1·657	88
,, ,, ,, ,, ...	1·442	1·615	89
,, ,, ,, ,, ...	1·413	1·567	90
,, ,, ,, ,, ...	1·693	1·698	99
,, ,, ,, ,, ...	1·407	1·707	82
After maltose.			
Dog shortly after ingestion	1·600	2·200	72
Cane sugar.			
Dog shortly after ingestion	1·333	1·333	Glucose.
,, ,, ,, ...	2·113	2·113	,,
,, ,, ,, ...	1·844	1·600	,,

Looking at the table and taking the case of the fasting animal first you will see that the portal blood, apart from the ingestion of food, not only contains sugar but contains about the same amount as exists normally in the blood of the general circulation. In the two dogs taken forty-eight hours after food it may certainly be considered that the blood was quite free from the influence of food and the sugar fell within the range given for that belonging to the general circulation. In the rabbits taken twenty-four hours after food an amount of sugar considerably in excess of that naturally existing in the general circulation was found to be present. The rabbit is an animal in this way exceptionally circumstanced that, although food may be withheld for some days, its stomach does not become empty. The food remaining in the stomach at the end of the twenty-four hours in the observations before us may be taken to account for the sugar in the portal blood beyond that contained in the general circulation.

Let us pause and see how results of the kind before us stand in relation to the glycogenic theory. The portal blood is found twenty-four hours after food to contain considerably more sugar than exists in the general circulation. The rabbit ordinarily is not likely to go so long as twenty-four hours between taking food, and with such the case the blood flowing to the liver would always contain more sugar than is present in the blood on the other side of the organ. Even here a contradiction is supplied of what is asserted regarding the state of the blood on the two sides of the liver. The condition observed further shows that an actual persistent stoppage of carbohydrate by the liver must be taking place.

After animal food the figures before us show there was always the full amount of sugar belonging to the general circulation, and sometimes there was more. After starchy food the figures are invariably higher than for the general circulation. In some instances very large amounts were found. The highest stands at 5·330 per 1000 taken as glucose. After the introduction of a solution of maltose into the stomach the figures we see stood at 1·600 per 1000 before treatment with sulphuric acid and 2·200 after, a relation which represents a sugar with a cupric oxide reducing power rather above that of the sugar employed. After the similar introduction of cane sugar into the stomach, sugar, it is perceived, was found to an extent considerably above that existing in the general circulation. The nature of the sugar was glucose. Complete conversion had taken place into invert sugar by the time of reaching the portal blood. Looking at the tabular representation before us as a whole and omitting the experiments with cane sugar, it is seen to be exceptional for glucose to exist. After starchy food particularly sugar was found with a cupric oxide reducing power as a rule considerably below that of glucose. The cardinal point shown by the information supplied regarding the portal blood is that it presents a markedly fluctuating condition in relation to the food. This, it may be considered, is nothing more than might be expected. But it is necessary that the fluctuation should pass no further, and I do not hesitate for a moment to assert that if it did so, that if the fluctuating condition were permitted to pass to the other side of the liver, after every meal a large quantity of sugar would be voided with the urine. One important office of the liver is to prevent the fluctuating condition of the portal blood from being transmitted to the general circulation—to keep, in other words, the standard constitution of the contents of the general circulation maintained free from being influenced by carbohydrate food received into the digestive canal and the urine also from being charged with sugar, as it would otherwise become.

BLOOD ON THE TWO SIDES OF THE SYSTEMIC CAPILLARIES.

I next come to the consideration of the blood on the two sides of the systemic capillaries—the blood, that is, in the arteries and in the systemic veins. To account for the disappearance of carbohydrate in the system it is said that the sugar assumed, under the glycogenic doctrine, to reach the general circulation is conveyed to the systemic capillaries, where it is alleged in some way or other to disappear. It is suggested that in its assumed transit through the systemic capillaries it becomes abstracted and utilised, though in what manner has not been satisfactorily defined. We are here led into utter darkness. It is obvious, if sugar disappears in its transit through the systemic capillaries, something must become of it. It must be changed by some process or other into something. No one has succeeded in formulating anything that can be regarded in the light of a tangible idea concerning either the process or the something. Many years

ago I conducted a series of experiments, devoting the greatest attention to secure exactitude, directed to comparing the blood on the two sides of the systemic capillaries. Experiments of this nature had been performed before, but without the special observance of the precautions requisite to obtain a correct representation of the two kinds of blood taken at the same moment. In the experiments which I conducted the blood was collected simultaneously from the arteries and from the veins, and the results were checked with a duplicate analysis of each sample of blood. Altogether eleven observations were made and the results came out showing a difference of three in the third decimal place. There was a difference of 0·003 per 1000, the excess falling on the side of the arterial blood. I think it may be considered, with the agreement between the blood on the two sides of the systemic capillaries so close, that no tangible evidence was supplied by these experiments of sugar being destroyed in its passage through the systemic capillaries. The interpretation to be drawn from the experiments, looked at both collectively and individually, decidedly was that there is nothing to show that sugar disappears in the manner it was formerly alleged to do.

I have so far shown you that the evidence on which the glycogenic theory has been based fails to hold good when examined in a manner to exclude the entry of fallacy into the experimental procedure. The liver taken at the moment of death is not more saccharine than the other organs and textures of the body. The blood on the cardiac side of the liver is not more saccharine than that on the portal side—indeed, less so, and it may be very much less so when carbohydrate matter is being absorbed from the alimentary canal. Lastly, no evidence is obtainable of a disappearance of sugar during the passage of the blood through the systemic capillaries when exactitude is observed in the mode of experimenting. Hence, then, when the experimental methods of procedure are shorn of fallacy not a shred of evidence remains in support of the glycogenic doctrine. Thus far I have only taken away the supports of the glycogenic doctrine, or, as it were, negatively refuted it by showing that it has been built upon a fallacious foundation, but I will proceed a step further and place before you positive evidence against the validity of the doctrine.

POSITIVE EVIDENCE AGAINST THE GLYCOGENIC DOCTRINE.

I have shown that the ground upon which the glycogenic theory has been constructed is faulty, and now, in addition to the negative evidence of untenability adduced, I will bring forward evidence of a positive nature affording proof that the theory cannot be true. It can be shown, as I think you will admit, that what the glycogenic doctrine involves is absolutely inconsistent with the existing order of things observable in the animal body. The proof is obtained through the medium of the urine.

The doctrine implies that sugar is conveyed from the liver to the systemic capillaries for the purpose of undergoing destruction. Now, being conveyed to the systemic capillaries means conveyance also to the kidney. The kidney receives the same kind of blood—arterial blood—as is transmitted to the muscles and the other parts of the body. It happens to be easily demonstrable that the secretion of the kidney constitutes an exceedingly sensitive indication of the constitution of the blood in relation to sugar. It affords a delicate measure of the amount of sugar existing in the blood. In its natural condition the blood contains, it may be stated, from about 0·6 to 1 per 1000 of sugar. With this small quantity existing as a standard constituent element there is a corresponding small amount present in the urine.

SUGAR IN HEALTHY URINE.

I believe it may be considered that no question can be entertained about there being sugar in healthy urine. At my next lecture I will show you some lantern slides of microphotographs of osazone crystals obtained not only from the healthy urine of the human subject, but from the urine of the horse, dog, and rabbit. I have in these tubes specimens of osazone in some quantity derived from healthy urine. You know that osazone is formed by heating a product containing a cupric oxide reducing sugar with phenyl-hydrazine. Combination ensues and the compound produced afterwards separates out in a crystalline form. From the crystals the sugar can be again recovered. The sugar is extracted from the urine by being thrown down as a lead compound, from which it is afterwards liberated. In this way sugar may be collected for operating with from a large quantity of urine. The reaction of sugar is also obtainable from healthy urine by the other tests for sugar. Indeed, it would be contrary to reason if sugar in proportion to that existing in the blood did not also exist in the urine. The kidney is the channel by which sugar getting into the blood in glycosuria and diabetes is eliminated, and if it did not pass off under natural conditions it would mean that the law in force for a certain amount of sugar was not equally in force for another amount simply because of it being smaller.

THE EFFECT OF INTRODUCING SUGAR INTO THE CIRCULATION.

If in any way the amount of sugar in the blood is increased an increase immediately follows in the urine. The blood and urine in this respect move together. The constitution of the blood as regards sugar is, as I have previously said, represented by the condition of the urine. It is absolutely impossible for sugar to reach the general circulation without it being made manifest through the urine. It was some years ago asserted that the blood possessed a tolerating capacity for a certain amount of sugar—that a certain amount might exist in the blood without elimination, whilst a larger amount was attended with elimination. For this to be true there must be a hard-and-fast line existing, one side of which there would be, and on the other side there would not be, elimination. It was stated that if sugar were injected into the circulation to the extent of one gramme per kilo of body weight sugar did not pass off in the urine, whilst if introduced to a larger extent it did; one gramme per kilo body weight was put down as the limit of toleration. Our power of recognising small quantities of sugar is more perfect now than formerly, and let us see by reference to the tables before us how the matter stands on appeal to a repetition of the old experiments. We are aided now by the quantity being susceptible of definite expression by figures.

Injection of Sugar into the Circulation.

—	Sugar per 1000 expressed as glucose.			
	Blood.		Urine.	
	Before sulphuric acid.	After sulphuric acid.	Before sulphuric acid.	After sulphuric acid.
1 gramme glucose (from honey) per kilo.				
Rabbit 1, killed at once	5·050	5·000	—	—
Rabbit 2, ,, ...	5·565	5·263	—	—
Rabbit 3, killed thirty minutes after.	2·450	2·703	—	—
Rabbit 4, killed one hour after	1·460	1·666	55·160	55·160
Rabbit 5, killed one hour and a half after	1·243	1·533	11·370	21·150
0·5 gramme glucose (from honey) per kilo.				
Rabbit 6, killed at once	2·380	2·543	—	—
Rabbit 7, killed thirty minutes after.	1·573	1·573	—	—
Rabbit 8, killed one hour after	1·390	1·370	11·370	17·860
1 gramme lævulose per kilo.				
Rabbit 9, killed at once	4·387	3·787	3·571	6·250
Rabbit 10, killed thirty minutes after	2·523	2·577	97·402	71·091
Rabbit 11, killed one hour after ...	1·893	1·800	37·037	35·333
Rabbit 12, killed one hour and a half after	1·603	1·517	30·303	25·900

The table before us speaks for itself. The quantities of sugar named were introduced into the jugular vein. The rabbits were killed at the time specified and blood instantly collected from the heart with the observance of the requisite precautions to avoid post-mortem influence. Wherever urine existed in the bladder it was collected and examined.

Rabbits 1 and 2 were killed immediately after the injection. The sugar found in the blood amounted to about 5 per 1000, and there is a striking harmony in the results obtained in the two cases. In Rabbit 3, killed thirty minutes after the sugar had fallen to about half. In Rabbit 4, killed one hour after, the sugar had fallen still lower. The urine obtained contained 55 per 1000 of sugar. In Rabbit 5 a little further fall in the sugar is noticeable, but the quantity still stood above the normal. The urine contained a definite amount of sugar, and it is observable that the sugar was not in the form of glucose.

In the second series of experiments 0·5 gramme of sugar per kilo of body weight was employed. The condition of the blood in each case tallied with what might be looked for from the previous experiments. Urine was obtainable from

the animal killed one hour after the injection, and was found to contain a decided amount of sugar. As in Rabbit 5, the sugar possessed a considerably lower cupric oxide reducing power than that of glucose.

In the third series of experiments lævulose artificially obtained was employed instead of the sugar from honey. As the table shows, 1 gramme per kilo body weight was injected. Notwithstanding what is said about this sugar being tolerated in diabetes the figures before us show that it was no more tolerated when introduced directly into the general circulation than the sugar of honey. A rough general accord is noticeable in the sugar of the blood compared with the first series. It happened that in each case urine was obtainable. In Rabbit 9, killed at once, we have figures to deal with, in round numbers 3 per 1000 before sulphuric acid and 6 per 1000 after. This, from my other experience, may be taken as representing what is ordinarily found with the natural urine of the rabbit, and it is to be observed that the figures do not correspond with glucose, but with a sugar of much lower cupric oxide reducing power. In all the rabbits where time was given for the injection to influence the urine a large quantity of sugar was found. As much as 97 per 1000, or approaching 10 per cent., was, as we see, present in the urine of Rabbit 10. A point noticeable in connexion with the figures from the experiments with lævulose is that they stand mostly lower after sulphuric acid than before. This is accounted for by lævulose yielding to the destructive influence of sulphuric acid in a manner that dextrose does not.

In another series of experiments sugar was injected into the subcutaneous tissue and the urine afterwards collected and examined. The table to which I will next proceed to direct your attention shows the results obtained.

Nature and Amount of Sugar in Urine after Subcutaneous Injection of Glucose.

—	Sugar per 1000 expressed as glucose.		Cupric oxide reducing equivalent.
	Before sulphuric acid.	After sulphuric acid.	
1 gramme glucose (from honey) per kilo.			
Rabbit 1	48·08	65·79	73
Rabbit 2	19·84	51·89	38
Rabbit 3	39·68	94·46	42
Rabbit 4	34·72	69·44	50
Rabbit 5	21·74	35·72	61
Rabbit 6	10·41	19·23	54
Rabbit 7	48·78	110·85	44

In all the seven rabbits experimented upon with the employment of one gramme of sugar per kilo body weight there was a notable amount of sugar found in the urine. Examination of the figures, however, shows something more than this—something of an unlooked for nature, which, to say the least, has the aspect of constituting a point of much interest and importance.

FROM GLUCOSE INJECTED A SUGAR WITH A LOWER CUPRIC OXIDE REDUCING POWER ELIMINATED.

The figures before us supply information not only regarding the amount of sugar contained in the urine, but likewise its nature. In every instance the figures obtained after treatment with sulphuric acid were much higher than those obtained from the direct titration of the urine. The sugar employed was glucose from honey, giving, as I took care to ascertain, the same cupric oxide reducing effect before and after sulphuric acid. Glucose was subcutaneously injected and sugar of a very different nature appeared in the urine. In only one instance—namely, in Rabbit 1—do we find the sugar eliminated possessing a cupric oxide reducing power above that of maltose. In Rabbit 2 the cupric oxide reducing power stood as low as 38 in relation to glucose taken at 100. In Rabbits 3 and 7 the cupric oxide reducing equivalents, as we see, stand only a trifle higher. As the issue, then, of the evidence before us, it appears that glucose introduced in a direct manner into the general system of a healthy animal does not remain as such, but is carried down in cupric oxide reducing power. The results obtained from these experiments on subcutaneous injection are supported by the experiments on direct venous injection. I incidentally alluded at the time I was referring to them to the fact I am speaking of.

I have taken care, as far as care can be taken, to secure that the inference deducible from these results is not open to fallacy. In experimenting with carbohydrates the observer is beset in all directions with chances of exposure to fallacy and requires to be constantly and vigilantly on his guard against error. It is stated that urine may contain "animal gum." This constitutes an amylose carbohydrate, and it occurred to me that I ought to ascertain that the increased cupric oxide reducing power after sulphuric acid was not due to the presence of this material. Animal gum is precipitable by alcohol, and I treated some of the samples of urine with a large quantity of absolute alcohol. After filtration the alcohol was driven off and the residue gave the difference in cupric oxide reducing effect noticeable in the original specimen. As far as I am aware no fallacy in connexion with this matter presents itself to creep in, and it appears that we may take it that when glucose is introduced into the general circulation it does not remain as glucose, but becomes reduced in cupric oxide reducing power, and in this altered form is eliminated with the urine.

NO TOLERATING CAPACITY OF THE BLOOD FOR SUGAR.

I will ask now, Are we justified in regarding it as true that there is a tolerating capacity for sugar in the general circulation? Is it true that sugar can be introduced into the general circulation without the urine being influenced by it? From all that I can see the urine is a most delicate indicator of the state of the blood as regards sugar, and the evidence of observation is decidedly to the effect that the smallest amount of sugar introduced into the general circulation will reveal itself immediately through the medium of the urine.

BLOOD AND URINE IN RELATION TO SUGAR IN DIABETES.

If we look to the relation observable between the amounts of sugar in the urine and the blood in diabetes we find a further illustration afforded of what I have been urging—namely, that the condition of the urine gives a representation of the condition of the blood. The table before us is one that I made use of in my Croonian lectures delivered in 1878. The blood was obtained by cupping and the urine analysed was for a corresponding period.

Blood and Urine in Diabetes.

—	Sugar per 1000 expressed as glucose.	
	Blood.	Urine.
CASE 1.		
Mixed diet	5·763	109·91
CASE 2.		
Mixed diet	5·545	94·08
Restricted diet	2·625	61·34
CASE 3.		
Mixed diet	4·970	93·39
Restricted diet	2·789	45·49
CASE 4.		
Partially restricted diet	1·848	48·11
Partially restricted diet	1·543	31·76

A close relation is here observed to exist between the amount of sugar present in the urine and that contained in the blood. The figures sufficiently speak for themselves, and I do not think it necessary to occupy your time in commenting upon them in detail. I may, however, just point out that in the cases attended with the large elimination of sugar, belonging to an urgent case the sugar in the blood amounted to about 5 per 1000, and that with 1·543 per 1000 of sugar in the blood there was a notable amount of sugar in the urine, but this case was a mild one, with only a limited quantity of urine voided, so that the sugar for the twenty-four hours was not large.

SUMMARY OF CONCLUSIONS.

The point at which we have now arrived is this. There is always a certain standard amount of sugar in the blood of the general circulation. There is always a corresponding amount of sugar in the urine. The sugar of the urine and that of the blood stand in accord, and when the sugar in the blood is increased the sugar in the urine rises in proportion, and it is absolutely incompatible

that there could be, say, 2 per 1000 of sugar in the blood, as occurs in the post-mortem state of it, without meaning a strongly saccharine condition of the urine. If the liver permitted sugar from ingested carbohydrates to pass through it, and, further, formed sugar, as is contended under the glycogenic doctrine, to be poured into the general circulation, the result would be the universal existence of a diabetic condition.

I maintain, upon the information supplied by the relation found to exist between the blood and urine, that evidence of a positive nature is afforded against the validity of the glycogenic doctrine. The liver, in fact, is required to perform the reverse office and prevent the passage of sugar into the general circulation. In proportion as sugar does pass in a free state, so will it appear in the urine. It is perfectly true that carbohydrate exists in all parts of the body and that there must be some means of transport from the seat of ingestion to the distant parts. I have said it cannot pass in a *free* state, for if it did, with its conveyance to the tissues it would also be carried to the kidney and reveal itself by appearing in the urine. I appeal to you, Mr. President and gentlemen, whether you do not find in the facts I have placed before you sufficient to render it evident that there cannot possibly exist a glycogenic function of the liver. The ground having been cleared of incompatibility, it will be my next duty to point out to you the manner in which I conceive carbohydrate matter becomes disposed of in the animal system. Whatever view is propounded must be of a nature to embrace disposal without entrance in a *free* state into the general circulation, and at the same time to permit of carbohydrate matter reaching the distant parts of the body without passing off with the urine.

Presidential Address
ON
MEDICINE: ITS RELATION TO THE SPIRIT AND TENDENCIES OF THE AGE.

Delivered before the Annual Meeting of the North of England Branch of the British Medical Association, Newcastle-on-Tyne, July 18th, 1894.

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GENTLEMEN,—It is our privilege to live in the last decade of a century remarkable for the utilitarian character of its inventions, the development of special industries, the rise of great towns, the accumulation of wealth, and for the improvement in the material and social well-being of the labouring classes. The dawn of the nineteenth century found England preëminently a commercial nation and with few large towns, with a population industrious and awakening to a sense of its claims to political and social privilege, the general prosperity of the country associated with agricultural interests, and the people governed by an oligarchy. Ninety years of unprecedented prosperity have passed away and we are conscious that, underneath our national progress, there are signs of social discontent and disease, an unwillingness to accept the teaching of authority or to be influenced by tradition, the right to think as each one wills, and the power of government no longer vested in the hands of a few but the many, and these exercising that power for good or ill, not only on political platforms, but in all circles, social as well as industrial. It may well become us, who are silent spectators of these changes, to pause and ask ourselves this question, What part are we, individually or collectively, playing in the great drama that is being enacted around us? what influence are we, as a profession, exerting upon social and industrial life, so that our mission may be fulfilled in the nationalisation of health? May I crave for your indulgence while I address to you a few thoughts upon "Medicine and its Relation to the Spirit and the Tendencies of the Age"?

It is with nations as with men—they have their periods of birth, development, and decay. A few only become pre-eminent. So far as Europe is concerned the history of the past is but the reflex of the events that transpired in the military, social, and intellectual life of Greece and Rome, and in Western Christendom. The Græco-Roman Empires have gone, but much that ennobled their national life remains. The torch that illuminated the intellectual theatres of Athens and Rome, though dimmed for centuries, has been handed on, and has lost little of its lustre. In philosophy and art the present age may not compare favourably with the past, but in the general application of the sciences, in our knowledge and practice of the healing art, the dawn of the twentieth century will break with an effulgence greater than that which inaugurated the Christian era. There is with many a tendency to laud the past at the expense of the present, to regard modern life and its institutions as the degenerated products of an age long gone, and to see in the social life of to-day indications of a civilisation that is on the wane. It is perfectly certain that Western Europe cannot always remain at the apex of civilisation. The opening up of our coalfields, the rapid development of industries, and the application of the physical sciences have largely contributed to placing Britain first among the nations. The source from which nearly all her wealth has been drawn, however, is exhaustible. Each year sees a larger mineral output. The true source of a nation's wealth does not rest in its minerals, but is derived from its surface production. However much England may attempt to become the workshop of the world, the recession of her coalfields and the competition of other nations must inevitably tell upon the prospects of this country. Meanwhile, wealth accumulates, and the cry is heard from the under-strata of society, "Give us more of the wealth that we have created, for it belongs to us, the sons of toil. Without labour no wealth. Give, therefore, to labour its due share of the wealth it has created." No man can remain unmoved as from some vantage ground he looks upon the procession of human life in our large towns to-day. He becomes fully cognisant of the great social inequalities that exist, and either sympathises with those who are struggling upwards, yet seldom rise, or, throwing in his lot with the masses, espouses their cause and clamours for larger opportunities and greater wealth. We cannot, I repeat, close our eyes to the social changes that are impending; but in what direction these will arise and what form they will take we know not. The imperative demands of socialism will have one day to be legitimately met and the claims of the toiler considered if the statement is true that labour alone creates wealth. Untrained labour cannot create wealth. It is skill, it is the intellect of man put into labour that is the source of wealth, and it is this feature of the question that is not sufficiently recognised. The amount of surplus production to be given to capital and the amount to be handed over to labour are questions in the settlement of which we, as a profession, can take no part. The wages of any class are regulated by the law of supply and demand. Although not directly concerned, this settlement of the wages question is a very important matter to a very large number of members of the medical profession, for as it is from the working classes that the major part of their income is drawn, they are necessarily influenced by the monetary recognition of labour, particularly if it only just reaches the limit of a "living wage." Disease has to be paid for as if it were a luxury. It is therefore quite impossible for unskilled labourers who are living in a town, and whose wages are small, to pay their medical attendant handsomely. To all of us, therefore, this wages question is a matter of considerable importance. Trades unionism has raised the position of the working classes and enriched their pockets. By combination they have secured a higher price for their toil than singly they could have succeeded in obtaining. Whilst the aim of trades unionism at the first was to make provision for their families in sickness and death, the objects at present are improvement in the conditions of labour, as seen in the demand for increased wages, reduction in the hours of labour, limitation of production, and improved sanitation of the industries. The medical profession has advocated the improving of the sanitary conditions under which our industries should be conducted. Dr. Arlidge has for years earnestly pleaded the claims of workers in the potteries. Dr. Sinclair White has demonstrated how the file-cutters of Sheffield owe the shortness of their lives to the deadly trade in which they are engaged. Sir John Simon, Sir Edwin Chadwick, and Sir B. W. Richardson lent their powerful influence to a cause which not only ameliorated the conditions of labour, but added years of life to those engaged in our underground industries. The direct influence of the

medical profession in shortening the hours of labour is, at first, perhaps, not so apparent; but our ideas of public health have permeated society, and are thus indirectly acting, and favourably too, on behalf of the working classes. The day of child labour in our coal mines is now a matter of history. Half-timers in our cotton factories are under State control. The employment in our textile industries of women who are mothers and of girls in occupations that are unhealthy are subjects towards the remedying of which the medical profession has always lent a helping hand. It is thus that, individually and collectively, we are contributing to set rolling the ball of social and industrial reform, and we are trying to secure for all who toil, not only that their occupation shall be a source of wealth, but also not be, as sometimes hitherto it has been, the cause of their early decrepitude and death.

There is no class of men by whom the sad effects of the differences in social life are more frequently observed or to whom the serious consequences of ill-requited labour more pathetically appeal than to us. It is ours to move with noiseless tread in the subdued glare of luxury, where wealth obtains all, to rob illness of much of its sting; and it is ours to stand where poverty throws its shadow and human life, as it slowly ebbs away, pays the penalty of existence in suffering unrelieved by even ordinary necessaries. It is scenes such as these, it is the pangs of hunger experienced and with no capability of relieving, that create the cry, give us the wherewithal to live; give us labour or its opportunities; give us a sufficient return for our toil, so that we may meet eventualities. This cry, be it remembered, comes from the working classes who, numerically, form the bulk of our population. Fully cognisant of the numerous imperfections of our social life, and while recognising the necessity for change, I do not see how socialism, as at present advocated, will give earth the heaven its supporters dream of. It may be that is because we are members of a profession, success in which is so largely personal, that we cannot allow the claims of individualism to be so rudely set aside by collectivism. Our professional existence depends upon life being imperfect and upon inequalities of the human constitution. Social progress is the sum of the efforts of individuals whose mental and physical inequalities had so far placed them beyond mediocrity that they transformed whatever they touched. No industrial system which insists upon rigid equality can awaken, like individualism, the inventive faculties of man. It is thus that intellect becomes not merely the creator of wealth, but is the only force underlying civilisation—it gives life to labour. With unlimited opportunities there is no freedom that can equal either in spontaneity or breadth the freedom of the individual, and there is no tyranny greater than that of social equality based on State control. Obedient to the laws of one's country, respectful of the claims of our fellow men, and with open opportunities, each man and woman must be allowed to carve his and her own career. Ability surmounts all obstacles. Intellect refuses to be fettered by social prejudice or stopped by the thought of any special age. It is the man who weighs probabilities, who recognises the drift of national thought, and acts accordingly that becomes eminent. The history of our country's supremacy is a memorial of individual ability. Our inventions and the utilisation of raw materials, our excellence in art and literary attainment, all bear the stamp of individuality. No form of socialism could be so productive. The progress of a nation follows the development of a few: the few lead and the many follow. Leaving, for the present, the socialistic side of this question, we must admit that the particular tendency of the age is towards a democratisation of all our institutions. We know how the influence of Parliament is invoked to protect infants, to guard industrial life, and how much it is sought for in matters relating to social purity. Instead of stimulating individual effort and drawing forth the character of men and women it is expected that all can be accomplished by parliamentary enactment. Social evolution is too complex a question to be thus regulated. Were the incentives to development all of one particular kind and originating invariably from one particular stratum of society, due simply to education and foreshadowed by events that could be anticipated and utilised, and were they influenced by external surroundings, the social organism might be thus controlled. But, just as in the human body development proceeds along certain lines of which the individual is, at any stated time, unconscious and therefore cannot control, so in the social organism changes arise so silently and from quarters so unexpected—proceed a certain length ere they are recognised and their influence felt—that we cannot always attribute to them their true causation. Take, for example, the rise of our great towns. This has been associated with the development of our industries, and, whilst many have benefited thereby, the rural emigration has so depopulated the country that it has robbed England of the yeomen and tillers of the soil. Instead of the healthy toilers of the fields we have in many places the pale-faced and somewhat stunted artisan of the town. Although rural emigration is one of the most notable features of the century it is difficult to explain it. The stimulus given to our industries by the acceptance of Free Trade is said to be the reason; but impoverishment of rural districts is proceeding in other countries where Free Trade does not exist. Clearly, therefore, it is not due to that. The great expense in the transit of manufactured articles from villages to towns, the more open market, the larger wages and shorter hours of labour in the towns, and that peculiar failing of our time—love of excitement and pleasure—are certainly not without their influence. Sanitarians view with regret this depopulation, and we naturally wonder whether anything will ever bring back prosperity to our villages. The law of evolution is slow but sure in its operation. Looking down upon the arena of human life and watching events men are impatient at the tardiness of progress, and in parliamentary legislation they seek a solution to the problems of time. Underneath all our institutions and anterior to human thought—uninfluenced by the storms of political passion, prodigal of life, yet heedless of individual death—evolution marches slowly onwards. Shaping individual and national life it is slightly influenced by these in return, and there results a gradual unfolding of character, which finds in duty its fittest sphere of operation. Parliamentary legislation may make life easier, but physical satisfaction is not mental enrichment. It is not where nature is most prolific and physical wants are easily satisfied that we find the highest incentives to action. It is true of human life as of nature. The surmounting of difficulties develops character, and character is power. The tendency of the age is to over-philanthropise. There is much to commend the Eight Hours movement to the favourable consideration of legislators for men engaged in laborious or unhealthy occupations, in which even eight hours' toil might be too much, but from the purely medical point of view there is no necessity for it to apply to all our industries. Apart from the far-reaching consequences of the passing of such a measure, as witnessed in its industrial bearings and its influence in the distribution of wealth, there would be a voluntary waste of human force as a producing agent. The average artisan of to-day is not over-wrought. His hours of toil are only two-thirds of that of most members of our profession. Once he has passed beyond the threshold of the factory responsibility is left behind. Ours is continually with us. We do not express an opinion unfavourable to a general Eight Hours Bill simply from a comparison of the time spent in manual toil with that of professional men, but purely on physiological grounds. The proof that the young artisan is not over-wrought and that he has sufficient time on his hands is an explanation of the excessive athleticism, football playing and cycling of modern days. The effect of these upon the rising generation, when unduly indulged, is much more likely to be prejudicial than the result of toil. It must be your experience, not less than it is my own, that of all the functional derangements that disqualify for life assurance the effects of excessive athleticism upon the heart are the most common.

The spirit of the age is one that finds expression in over-refinement or excessive culture and in an unwillingness to recognise the dignity of manual labour. Free education is the birthright of every child. Whether it is the result of the method in which this is given and the complete absence of special attention to individual requirements, or the over-pressure of education upon a nervous system, not hereditarily prepared for its general acceptance, our modern education is supplying us, as a profession, with an ever-increasing number of children suffering from functional derangement of the nervous system—a tendency to the assumption of early invalidism and the early requirement of spectacles, particularly amongst girls. It is to the excessive development of sentiment and over-refinement of feeling that must be attributed the *ennui* so characteristic of many young

people—a desire to withdraw from life ere they have well entered upon it, an unwillingness to combat the stern realities that lie before them. It was not of such stuff our predecessors were made. Never has there been such shrinking from physical pain or a greater inability to bear it than there is to-day. Strong men shudder at it and women recoil from it. There is greater respect shown to the gentler sex. Woman occupies a more exalted position. There is on the average greater tenderness shown to children than formerly. The feelings of animals are more respected, and whilst we would not that chloroform and other means for allaying pain should be taken from us, nevertheless all these emotions that I have mentioned may be unduly nurtured. Health of mind consists not in excessive cultivation of feeling, but in reining sentiment with reason, in wisely combining altruism with egoism, and in the individual not spending his life wholly for himself. Never, perhaps, did altruistic feeling run higher than to-day, and yet at no period has there been so much social dissatisfaction. May be it is the result of it. There is no stimulus to the development of the individual equal to the feeling of self-dissatisfaction and that a man believes he is fitted for better things. Desire to attain stimulates the ability to accomplish and creates opportunities for doing so. Aspiration is elevating—it lifts the individual whilst it points the way along which application must follow. It is thus that in evolution there is a gradual moving from the lower to the higher—the continual supplementing of the aristocracy, intellectual and social, by an upward current, carrying with it all the possibilities of greatness. To the highest pinnacles few alone can rise. Wealth and family position may contribute their quota, but the life history of our greatest men shows that intellect and character are the only passports to success. It is not, however, towards individual greatness thus realised that jealousy points the finger or that feelings of envy are expressed. It is of a class which lives in a condition of repose that inherited wealth allows, precluding thus the necessity for labour, and the accumulation of surplus in the hands of the capitalist whilst his workmen have necessarily only a limited wage which wring from the socialist the cry of "Disgorge." The prosperous decades of this century—the higher wages; the method of educating children; the better clothing, feeding, and housing of the working classes; the comparative ease with which luxuries can be brought within reach of all; the social instinct tickled by theories, stimulated by promises, and encouraged by the hopes of those who see in reform a permanent solution of all our national ills: it is these that have created a sense of discontent, mutual distrust of the classes, and a weakening of that feeling of brotherhood that ought to bind men to each other.

An old Scottish patriot, Fletcher of Saltoun, said: "Give me the making of a nation's songs, and I care not who makes its laws." It might equally be said, Give us the authentic record of its mortality and its sickness, and we will tell you the character of the people. Disease, to a large extent, is but the morbid reflex of the habits and social life of a race. In the development of a nation when life is hard, population scanty, food-supply scarce and poor in quality men and women enjoy rude health. As national development proceeds disease increases and takes on peculiarities that are characteristic of the age. It is thus that the type of disease changes and that new diseases appear and reappear. Rome in the height of its greatness was different in this respect from Rome struggling for supremacy; and England of the nineteenth century is a wide contrast to England of the fifteenth. Into the causation of disease many factors enter. Hereditary predisposition, we know, is largely the result of the transmitted, social, and dietetic errors of a bygone age. Many forms of nervous, cardiac, gastric, and renal disease are the outcome of the restless activity of our time, of errors of diet, and of faults in our social, industrial, and economic life. Just as civilisation is followed by attendant ills, so in the rear of individual and national success stalks disease. In imperial supremacy and territorial greatness, in colonial enterprise and excellence of government, in individual and national wealth, in science rather than in art, in social tastes and national vanity, England of to-day is but the counterpart of Rome before its downfall. Society was then cradled in the lap of luxury, for wealth had accumulated whilst responsibility was unheeded. Work was considered degrading. In the attractions of the club and in midnight revelry young men of the time found the means of shortening life rather than of improving it. Women regarded motherhood as a curse, for it interfered with their daily round of pleasure, and was thus avoided, steps even being taken to prevent it. They not only aped men in their dress and habits and in their methods of pleasure seeking—they came to resemble them in their diseases. Against all this, whilst truly depicting the licence of the period, there remains the indictment of their countryman Seneca, that, as an indication of the luxury of the age, even the women had become bald and gouty. History repeats itself; but is there no lesson to learn? The moral and legal freedom allowed to the Roman matron did not impart a higher tone to society—it tended rather to her own moral degradation. The emancipation of woman was more complete in this than in any other age. It had the opportunity of regenerating society, but it failed, although, doubtless, amongst it were to be found many examples of chastity and virtue. Domestic life was abandoned, maternal care was brushed aside, pleasure was sought and freely indulged in. No man can live to himself alone, but from women even more is expected by nature than from men. Their influence for good or ill is less seen and felt in the early years of their own life; it is in the generation that follows. They play an important *rôle* in the evolution of society. For neglect to comply with the laws of nature which sexual peculiarity imposed upon them and for refusal to recognise its attendant responsibilities, for selfish acquisition and duty set aside, social and national retribution followed. The advocates of social freedom—the emancipation of woman and the higher education of the sexes—should remember that the consequences of these are further-reaching than the immediate age in which we live.

Our position as a profession in regard to the questions of the day is threefold: we must interest ourselves in all subjects relating to public health; help forward all social movements that will ameliorate the ills of life and make existence pleasurable; and, whilst the propriety of actively participating in politics may be disputed, there are certain local matters towards the democratisation of which we cannot refuse to lend the sanction of our opinion. Pure air and pure water should be within the reach of all. The atmosphere in and around Newcastle is polluted with material which perfect combustion could diminish or remove. The water-supply of large towns is one of the most important municipal problems of our time. What is so necessary to health should not be doled out by a company whose interest oscillates between dividend and public service. There should be a responsibility which public opinion can reach. For the effects of a dry season no individual or corporate body is answerable; but in regard to the pumping of water from a river receiving sewage into a reservoir for drinking purposes no adverse medical opinion can be too strongly expressed. It is strange that the experience of other towns should be so disregarded and a practice indulged that elsewhere has been followed by disastrous consequences. We not only want in Newcastle pure water, but an unlimited supply thereof; and no modern scheme which, on the statement of its promoters, will only cover the exigencies of from ten to fifteen years can be regarded as a solution of the difficulty. Substitution of municipal for the present ownership would create, at least, a healthier public feeling in regard to this important question. If it is the duty of a corporation to see to the purity of the air we breathe and the water we drink, it might make proper provision for the housing of the poorer working classes or see that adequate provision is made for them. As regards health and the means of obtaining and keeping it, as regards freedom in education and the fullest opportunities for development, we move in company with the tendency of our time, but until we are convinced of the righteousness of socialism in all its bearings we cannot allow the claims of individualism to be ruthlessly ignored.

Gentlemen, I have not yet thanked you for the very great honour you have conferred upon me in electing me president of the branch. I do so now most cordially, deeply sensible of the compliment conferred and of its unmerited desert. Fifteen years ago I reached the Central Station a total stranger to Newcastle, my only passport being a letter of introduction to Professor Philipson from my friend and teacher, Professor Gairdner. Though professionally these fifteen years have dealt kindly with me, personally the retrospect is one necessarily of joy and sorrow. I feel that a large section of my life is gone. I look around me, too, in my daily round and I miss old familiar faces. Of my colleagues, Dr. Luke Armstrong, the energetic and much-respected Registrar of the College of Medicine, always a kind-hearted friend, swift to resent injustice and repudiate calumny; Dr. Heath, one of the ablest surgeons,

with an intellect far transcending that of most men of to-day; to me always a most generous friend, and from whom, after a serious discussion, I always felt that I had gained information; whose mental vigour retained to the last all the enthusiasm of youth, and whose benefactions to the College of Medicine will be gratefully remembered; and Dr. Gibson, distinguished alike by his courtesy and geniality, who was with us last year at Norton: all of them are missed. I may have failed to have paid that tribute of respect to their worth which their abilities and friendship should naturally call forth, but it remains a sunny memory in the hearts of all who were intimately thrown into contact with them. An honour, such as you have conferred, is a conspicuous mark on my earthly pilgrimage. Honours, even when they come unasked, should ever be gratefully received. They may or may not be a recognition of personal worth or professional friendship, for human actions are liable to misconstruction. Individual character, however, is more likely to be ennobled by an appreciation of all that is good in men than by the application of what De Quincey calls the "abating process." Our profession is one that educes all that is truest and best. Expanding intellect alone can deal with the ever-increasing problems of medicine and an enlarging heart beat in sympathy with those who require our services.

"The Eternal step of progress beats
To that great anthem, calm and slow,
Which God repeats."

Coined in the Divine mint, and bearing the impress of our Maker, we ought to realise the purport of our existence. Estimating aright the value of human life, conscious that a price has been paid for it, and that no life is without value, let us learn by the experience of the past, take comfort from the present, and with hope step boldly out into "the future, which, though I cannot see, I guess and fear."

A REMARKABLE CASE, PROBABLY ALLIED TO EPILEPTIC AUTOMATISM.

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FOUR years ago I published a series of cases illustrating the condition known as "epileptic automatism"[1] in which epileptic patients, at the close either of a severe fit or of a trivial seizure of petit mal, may, while completely unconscious and irresponsible, perform acts in all appearance voluntary, which are often extremely complex and very frequently grotesque. These "unconscious spells," as the patients often call them, may last a few seconds or may be extended over hours, as was illustrated in the paper referred to. Similar cases have also been fully described by Dr. Hughlings Jackson[2] and Dr. Gowers[3] in this country, and by Trousseau[4] and Fabret[5] in France.

In almost all cases, when the patient recovers consciousness there is absolute and permanent oblivion of what has transpired during the attack. In one or two unquestionable epileptic cases, of which I have notes, and in several isolated cases which have been published, when the result of their actions has been shown to the patients one or two incidents have been faintly remembered by them which seem unreal, and "as if they had happened in a dream." In this paper I wish to draw attention to a case of my own, and to two others, where very similar attacks occurred in patients in whom no definite positive evidence of epilepsy could be traced.

A young woman barely sixteen years old, who had been married three months, was brought to me in July, 1893, while under remand on a charge of child stealing, for an opinion as to her responsibility for the act. The facts as far as I could collate them from several accounts were as follows. On the evening previous to the theft she had severe frontal headache, and a sense of weight at the vertex, but there was no account of anything like an epileptic seizure. She stated that she could not remember getting up in the morning. Her husband said that she was down to breakfast, but seemed queer, ate nothing, and did not speak. About eleven o'clock she was heard to leave the house and at noon returned with an infant fifteen months old, which she had obtained by sending the young nurse in charge of it away on a bogus errand. No one saw her until her husband came home at 9 P.M. and found her in bed rocking an infant and pretending to suckle it, while the child was screaming with hunger. She said it was her child, became wildly excited, and insisted on his going out to procure a feeding-bottle and some port wine. Noticing subsequently that the infant had eight teeth, he sent for his wife's sister, who took the child to the police station. The wife was arrested and while in the cells was almost maniacal till 4 A.M., when she suddenly "woke up," so to speak and begged to be told where she was. After this there was no abnormal symptom beyond severe headache, which lasted some days. Neither at the police station nor subsequently, so far as I could ascertain, did she make any remark betraying any recollection of her performance during the day in question. She persisted that the last thing she remembered before she found herself in the police cells was going to bed at home twenty-eight hours before. The magistrate humanely allowed her out on bail and subsequently discharged her in order that she might have medical treatment. When I saw her there was nothing marked about her external appearance. Her memory generally was good, except as regards the period of twenty-eight hours mentioned above. There was no motive whatever for stealing the child, as she had only been married three months, and I ascertained by examination that she was not, and never had been, pregnant. The child was a strange one, and there was no question of any previous attachment to it. The previous history of this case is extremely interesting. When three days old she had general convulsions, which continued at frequent intervals until she was two months old; she had none subsequently. When two years old she would eat all sorts of garbage and was particularly partial to the sawdust out of dolls, which she would eat like sugar. She was an extremely precocious child, quick at her lessons, especially music, and early showed a fondness for dressing up and acting. When only four years old she slipped out of the house and offered her services as a fairy at a neighbouring theatre, and when ten years of age she was fond of dressing up as a servant at home and would insist on acting up to the part, demanding to take her food after the family had done, and so on. She ran away from home to get married, although her engagement was sanctioned by her parents. Probably it also was from love of imitation, as three of her family had previously run away to get married. A year before coming under observation she was standing with her arm jammed in near the hinge of an open door "for pleasure," when, forgetting the position of the arm, she suddenly turned to go elsewhere and snapped both bones of the forearm. She seems to have experienced little pain, and probably the arm was anæsthetic at the time. There have been no hysteroid fits, but she is frequently emotional, and her mother described her as being "very hysterical." There was no history of epileptic fits (if the infantile convulsions are excluded) or of vertigo, or of anything that clearly pointed to petit mal. As regards any previous attacks of automatism, her husband told me that several times when he had taken her to a place of amusement "her face went just like a marble statue." On getting home she would deny that she had been out for the evening, although subsequently some faint recollection might return to her.

The case was by no means a simple one. There seemed to be three alternatives: (1) that the unconsciousness was shammed and that the whole performance was carried out in order to obtain notoriety; (2) that it was a phenomenon of hysteria; and (3) that it was a post-epileptic occurrence. There was much in the girl's previous record in favour of the first alternative, such as her love of acting, shown from childhood, and of making a sensation, as shown by her runaway marriage with a man who had her parent's consent to marry her, and by her emotional behaviour on many previous occasions. On the other hand, there was an entire absence of motive so far as could be ascertained, and the nature of the offence itself, which rendered her liable to long imprisonment and so injuriously affected her reputation as a newly married wife. Her demeanour from the time when she came to herself at the police-station, the complete

[1] Post-epileptic Unconscious Automatic Actions, THE LANCET, July 5th, 1890.
[2] West Riding Asylum Reports, 1875.
[3] Epilepsy and other Convulsive Nervous Disorders, 1881.
[4] Trousseau: Clinique Médicale, vol. ii.
[5] De l'État Mental des Epileptiques: Arch. Gén. de Méd., 1860-61.

oblivion of the events of the day in question, together with the general features of the case, led me to negative the view that it was an imposture and to report that in my opinion she was not responsible at the time. The question as to whether it was a hysterical or an epileptic phenomenon is extremely difficult to decide. There was strong evidence of hysteria in the previous history of the case, but such periods of unconsciousness in hysteria are in this country, so far as I am aware, unknown, although cases have been described, mainly in the south of France; but the nature of many of these is to my mind epileptic rather than hysterical. The positive evidence of any epileptic tendency in this patient was slight, and consisted chiefly of the numerous convulsions from which she suffered in infancy. It is possible that the spells mentioned by her husband were periods of automatism after unobserved attacks of petit mal. The grotesque character of her performance, the sudden awakening, and the (apparently) complete oblivion subsequently correspond closely with the phenomena met with after epileptic fits. There is insufficient evidence to allow one to speak dogmatically, but I should regard the case as one on the borderland between epilepsy and hysteria, and the epileptic element as the essential factor in producing the automatism. It was my intention to hypnotise the patient in order to ascertain whether in the hypnotic condition she would remember and describe what had happened during the period of automatism. This has been successfully accomplished in some cases (see later), and the account verified. Unfortunately, I was prevented from carrying out the test in this case.

One of the most remarkable of these cases of prolonged automatism in which no epileptic element could be definitely traced is fully described by Charcot.[6] The patient was sober and well conducted and had been under observation for some time. The accounts he gave of himself were in many cases corroborated by independent inquiry. He was first seized with an attack when thirty-four years old. He lost consciousness when walking in the street at 8 A.M. He knew nothing more until 10 P.M., fourteen hours later, when he found himself still in Paris, footsore, hungry, and tired, and he was unable to work next day. He continued to have similar unconscious "wanderings," lasting some hours, at intervals of three or four months, until at the end of two years he had one which lasted eight days. He was delivering goods in Paris for a firm in that town which employed him, and he had a considerable quantity of money about him, when about 7.30 P.M. he lost consciousness, and as he did not return the driver of the van he was with drove off without him. Eight days later he suddenly "woke up" on a bridge in a strange town, which, on inquiry, he found to be Brest. His clothes and boots were in good order, so that he had probably stayed at an hotel. On examining the contents of his pockets he found that he had spent £8 out of the £40 of his employer's money with which he started. He was about to send a telegram to his employers, when the unlucky notion entered his head to consult a gendarme. This official promptly took him into custody, and the magistrate remanded him to the cells for a week and would not grant him permission to see a medical man although he had a certificate from M. Charcot detailing his liability to these attacks. At the end of a week he was liberated by the intervention of his employers. How he spent the eight days was never cleared up. (There is no mention of his having been hypnotised subsequently.) Although there was no history of epilepsy in this case M. Charcot held strongly that it was of this character, and this was so far confirmed by the marked influence of bromide of potassium in diminishing the frequency and duration of the attacks. Before the long attack described above, the administration of bromide had unfortunately been suspended for some time. A similar case is reported by Motet[7] in which a patient suffering from traumatic epilepsy used to have similar wanderings after the fits. On one of these occasions on "waking" he found he had been unconscious for over a week, that he had been as far as Nice, and had spent £60.

The most interesting and important case in this connexion, owing to its duration and the subsequent behaviour of the patient when hypnotised, is quoted by Professor James[8] (for the reference to which I am indebted to Dr. Hughlings Jackson). He says that the facts have been investigated by, among others, so high an authority as Dr. Weir Mitchell, who was satisfied as to the general accuracy of the account. The case was that of a clergyman. As regards his previous history, at the age of thirty he temporarily lost his sight and hearing, apparently from religious excitement. He had been subject to headaches and to temporary fits of depression. There was no definite history of epilepsy, but he has had "several spells of unconsciousness" lasting a few minutes, which may have been of this character. On June 17th, 1887, he drew over £100 from a bank to pay for a certain plot of land. He then got into a tramcar, and this was the last incident he remembered. He was not heard of for two months although advertised in the papers as missing and sought for through the police agencies. On the morning of March 14th, at a place at least 300 miles away, a man calling himself A. J. Brown, who had rented a small shop six weeks previously and stocked it with stationery and small articles, and carried on the trade without seeming unnatural or eccentric, suddenly "woke up" in a fright and called upon the people of the house to tell him where he was. He said that his name was ——, that he knew nothing of ——, was entirely ignorant of shopkeeping, and that the last thing he remembered (it seemed yesterday) was entering the tramcar at ——. He soon proved his identity. He was very weak and exhausted, and had lost £20. During the six weeks no allusion to his former life could be traced, except that he once gave an address at a prayer meeting as Brown in which he related an incident which he had witnessed in his natural state. The fortnight, however, which transpired between his leaving the one place and his arrival at the other remained unaccounted for, and in the hope of obtaining some information on this point he was hypnotised three years later. In the hypnotic condition he answered at once to the name of Brown. He said "he had heard of —— (his correct name), but did not know that he had ever met the man," and when confronted with his wife he said emphatically that he "did not think that he had ever met the lady before." When questioned he at once recounted his doings in the "lost fortnight." He had spent an afternoon in Boston, a night in New York, and ten days in Philadelphia, first at an hotel, afterwards at a boarding-house. The proprietors of the latter remembered him quite well and said that he was very quiet, occupying himself chiefly with reading, and talking little, and that he never seemed to be at all odd in his actions. He could not be induced to confuse the two existences. No account has yet been given (so far as I am aware) of the subsequent progress of this case. Although one may, perhaps, venture to take one or two of the details *cum grano salis*, the dual existence which is shown in this patient's case is extremely striking, especially as one has the benefit of the evidence of independent witnesses as to his conduct during the two months that the attack lasted.

The question arises whether, in cases of undoubted epileptic automatism, there may be a similar condition of dual personality. At present I have been able to find no clear evidence on the point. Occasionally, and particularly in the simpler cases, a repetition of the same act is found—e.g., attempting to undress; but I have not yet met with cases in which patients acted definitely as if they had lost their own personality, as was the case with the American clergyman. It will, however, be desirable in cases where the automatic actions have led to unpleasantness or to false charges to hypnotise a patient, as the information so obtained, though of course in itself worthless as evidence, may lead to facts being brought to light which would not otherwise have been forthcoming. For merely experimental purposes I should not, however, at present feel justified in hypnotising such patients.

Wimpole-street, W.

[6] Leçons du Mardi à la Salpêtrière, 1889.
[7] Ann. Med. Psych., 1886, p. 123.
[8] Principles of Psychology, vol. i., p. 391.

HALLUX RIGIDUS.

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THE article on hallux rigidus by Mr. Mayo Collier in THE LANCET of June 30th is of special interest to me, for it confirms in many respects the views which I expressed in a paper read before the Edinburgh Medico-Chirurgical Society in 1887. An abbreviated report of this paper may be found in vol. vi. of the Society's Transactions, p. 277, and in 1887 I

proposed in a brief note[1] the term "hallux rigidus" for this condition. The opinions which I then expressed were contrary to those of other correspondents at the time; but as the nomenclature and pathology which I then suggested have gradually found their way, in a more or less mutilated form, into common use, it may perhaps be as well to shortly repeat my propositions, though it will be hardly possible in so short a paper to prove my contentions.

1. Hallux rigidus, properly so-called, consists of an inability to fully dorsiflex the great toe on its metatarsal bone. In health it can be dorsiflexed to a right angle; any limitation of this range of movement must be considered as including the case in the class, but it is only in aggravated cases where dorsiflexion is entirely, or almost entirely, abolished that discomfort is caused and the surgeon consulted. 2. Hallux rigidus is never caused by flat-foot alone, though always associated with it. It occurs in flat-footed patients who wear such boots as prevent the angle of 30° (or thereabouts) which normally exists between the first metatarsal bone and the first phalanx, being maintained when the base of the metatarsal passes downwards in the falling of the instep in flat-foot. Strictly speaking, the great toe is not flexed on its metatarsal bone, but the metatarsal is, so to speak, flexed on the great toe; and therefore I objected to the term "hallux flexus," which was proposed by Mr. Davies-Colley, as misleading in pathology. This term should be restricted to those rare cases of pure plantar flexion of the hallux due to contraction of muscles from spinal or other causes and unassociated with flat-foot. I have seen two such cases, and they were both cured at once by tenotomy. 3. That hallux rigidus is never caused by flat-foot alone is proved by the fact that negroes, who are very commonly flat-footed, never suffer from hallux rigidus unless they wear boots. Their unrestrained big toes turn upwards when the instep falls and the normal angle of 30° above mentioned is preserved. The clodhopper's boot, the French sabot, and other varieties of boot are, by a sensible arrangement dictated by experience, purposely made so as to allow of this necessary dorsiflexion of the great toe; and therefore in people who wear such boots the condition is not met with. The ordinary strong boot of the town boy is the one which, in the presence of flat-foot, causes the disease. 4. While, as in other painful joints, a certain varying amount of the stiffness may be due to muscular spasm (as can be verified if the patient be anæsthetised), the essential reason for the loss of dorsiflexion is contraction of the inferior portions of the lateral ligaments of the joint. This portion of the ligament is slackened when (the toe being fixed by the boot) the instep falls. It consequently in time becomes contracted; whereas the superior ligamentous structures are put on the stretch, sometimes to such an extent as to cause pain. The upper part of the joint surface on the dorsal aspect of the metatarsal head no longer takes part in the work of the joint; it consequently becomes altered, eroded, lipped, &c., as is often seen in joints elsewhere under similar conditions. The glenoid or plantar ligament can have little to do with the matter, for it is fibro-cartilaginous and its fibres run transversely; therefore its power of contraction must be trifling. 5. When the instep falls of course the foot lengthens along its inner margin. The big toe is thus thrust forward (constituting the "abnormally long great toe" of some writers) and impinges at every step against the end of the boot. In this way additional irritation is probably caused in the joint, synovitis follows, adhesions form, and the stiffness is increased. 6. The condition is frequently bilateral; it occurs generally in young males from twelve to twenty who have a lot of standing or running about to do, such as errand boys; in other words, in exactly the same class in which flat-foot is so common. It occurs occasionally, but not nearly so often, in females. It is naturally associated with the same want of muscular and vascular tone which one finds in flat-foot. 7. Mr. Mayo Collier says the condition is a comparatively rare one. I should call it a very common one. It can be frequently seen in any of our large infirmary out-patient rooms, and I have no hesitation in saying that I have seen scores of cases in the last twenty years. Perhaps this may be due to the fact, which may surprise some of my readers, that the children of the lowest class in the slums of Edinburgh, even in the present year of grace, generally run about without boots; and though I am well aware that on theoretical grounds it may be objected that the free play of the bare foot ought to prevent rather than cause flat-foot, as a matter of daily experience I know that it is far otherwise. And how does the theoretical objector propose to explain the flat-footed negro? 8. While there is no reason why gout, rheumatism, rheumatoid arthritis, traumatism, &c., should not occasionally cause stiffness in this joint as in others, these conditions have no primary causative relation whatever to true hallux rigidus.

Treatment.—In all but the severest and most neglected cases all that is required is to stretch the shortened ligaments and break down any adhesions, if necessary under an anæsthetic; then keep up the gained power of dorsiflexion by daily passive movement; and firm pressure will be required for this purpose to overcome muscular spasm in the flexors. In addition, the flat-foot must be suitably treated by tiptoe exercises, massage to the calf muscles, supports, &c.; but into this part of the subject I must not enter at present more fully. I have found this treatment sufficient after a few days in almost every case to enable the patient who, it may be, limped into hospital in great pain, to walk any distance in absolute comfort. There are a few old-standing cases with firmer ankylosis, where removal of the base of the first phalanx may be necessary. This proceeding (recommended by Mr. Davies-Colley in 1887) is preferable, in my opinion, to interference with the head of the metatarsal bone, as being less likely to interfere with the tripod strength of the foot. I have done this operation in one case with a perfect result. Where such an operation is not permitted, and the case is beyond the reach of the milder means detailed above, the patient can be made to walk comfortably, though with a somewhat awkward gait, by adopting Professor Chiene's plan of inserting a rigid metal plate in the whole length of the sole of the boot, so as to prevent any possible strain on adhesions or shortened ligaments in attempts at dorsiflexion in walking. This treatment is of course merely palliative, as it perpetuates and does not cure the stiffness, though it certainly entirely removes the pain in walking as long as the plates are worn.

Manor-place, Edinburgh.

[1] Brit. Med. Jour., May 28th, 1887.

THE RADICAL TREATMENT OF LUPUS.[1]

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AFTER considering the pathology of lupus and its behaviour after all other methods of treatment the conclusion must be arrived at that a complete and free excision, involving the whole thickness of the skin, is the ideal treatment. Until recently excision was only possible in the case of small patches of the disease where the edges could be brought together with sutures after the operation, for the tediousness of healing by granulation and subsequent cicatricial contraction prevented such treatment for patches of any considerable size. The combination of immediate skin grafting after Thiersch's method with free excision enables the surgeon to radically treat patches of lupus of any size. Small parts of a patch were treated in this way by Professor Thiersch in 1889, but he took five or six sittings to complete the removal of the lupus. I believe that Mr. Watson Cheyne was the first to perform such an operation in this country, and some of the first cases so treated were shown at the Medical Society of London[2] in March last year by Messrs. Watson Cheyne, Bruce Clarke, and myself. At the meeting of the British Medical Association at Newcastle I communicated a paper on this treatment for lupus,[3] and I think that many surgeons have now given it a trial. With regard to the operation itself, one of the most important factors in its success is a very strict attention to antiseptics; this is the only way to ensure the vitality of the extensive skin grafts. The lupoid patch and surrounding skin should be thoroughly disinfected on the day before the operation, and a "packing" of gauze soaked in 1 in 20 carbolic acid solution should be kept on all night. The part from which the grafts are to be taken should be similarly prepared. The patient must be placed under an anæsthetic, and an incision is made down to the subcutaneous fat all round the lupus about a quarter of an inch from its margin. The whole thickness of the

[1] This paper is part of a post-graduate lecture delivered at the West London Hospital.

[2] THE LANCET, March 18th, 1893.

[3] THE LANCET, Aug. 19th, 1893.

skin, together with the subcutaneous fat, is then dissected off, the bleeding points are clamped with pressure forceps, and sponge pressure applied. While the bleeding is being stopped the grafts should be cut; for this purpose I employ a special razor with an extra wide blade, on which a long ribbon-like graft can curl up when cut. The skin over the front of the thigh, which is the preferable part, is held tight by an assistant and the surface moistened with 1 in 4000 mercuric chloride solution while the grafts are cut; the grafts usually measure from 1 in. to 4 in. in length, and about 1 in. in breadth; they include the epidermis, the rete mucosum, and the tips of the papillæ. The grafts are slid off the razor on to the wound or on to the surrounding skin, which has previously been moistened with warm antiseptic solution, and are pushed into position with a probe, care being taken that their edges are uncurled and that they overlap the margins of the wound and each other. The wound is dressed with a piece of gauze protective tissue and cyanide gauze; this does not require changing for a week, when in most of the cases the wound is found to be practically healed. The part from which the grafts have been taken is similarly dressed, and being merely an abraded surface heals within ten days without any cicatricial contraction. The following eight cases were treated in this way at the West London Hospital.

CASE 1.—A girl aged nineteen years, with an ulcerated patch of lupus measuring 4 in. by 3 in. on the inner side of the left thigh. This had existed six years. It was freely excised and grafted on Oct. 20th, 1892. Now the new skin is quite supple and there is no recurrence.

CASE 2.—A woman aged thirty-seven years, with a patch of lupus on the right shoulder measuring 6½ in. by 4¾ in. It had existed as long as the patient could remember, and had been treated by scraping, caustics, and salicylic acid plasters. This was completely excised on Dec. 20th, 1892, and grafted; a slight recurrence at one margin appeared six months later, and was excised on Aug. 20th, 1893. She is now able to do her household work, and is pleased to be rid of a disease which had existed thirty years or more.

CASE 3.—A girl aged eighteen years, with a patch of lupus on the left cheek measuring 1½ in. by 2½ in. This had existed fourteen years and had been scraped six times; it was freely excised on April 21st, 1893, and grafted. The scar is now scarcely noticeable and there is no recurrence.

CASE 4.—A girl aged twenty-four years with an ulcerated patch of lupus on the left cheek measuring 3 in. by 2 in. This had existed thirteen years, and had been treated with caustics at intervals for eight years. It was excised on April 24th, 1893, and grafted. She is now quite well.

CASE 5.—A boy aged two years, with a patch of ulcerated lupus on the tip of his nose and with other patches on the arms and thighs. This had existed for one year and nine months; the patch on the nose was excised and grafted on Aug. 22nd, 1893. The scar now cannot be seen and there is no recurrence.

CASE 6.—A boy aged sixteen years, with lupus involving the whole of the right cheek, extending over the bridge of the nose up to the eyelid, and downwards below the angle of the jaw. It measured 5½ in. by 4¾ in. and had existed eleven years. There was another patch of lupus on the right shin, which measured 2½ in. by 2 in. Both patches were freely excised on Dec. 22nd, 1893, and grafted. There is no recurrence, and the only deformity is some retraction of the angle of the mouth.

CASE 7.—A boy aged sixteen years, with lupoid patches on the right shin which had existed two years. This was excised and grafted on March 2nd, 1894. He is now well.

CASE 8.—A boy aged eight years, with two patches of lupus on the face, one below the chin and the other on the right cheek. The patch below the chin had existed four years, that on the cheek for only two years. Both patches were freely excised on March 16th, 1894, and grafted.

The result of these cases is, I think, highly satisfactory, although a slight recurrence had taken place in Case 2, which is explained by the fact that I did not carry my incision far enough away from the margin and so left some doubtful skin. When the grafts do not all "take," the intervening portion heals quickly by granulation, giving rise to a raised cicatrix however, which of course contracts strongly; the scar left after grafting does not show the same tendency to contract, since no granulations are developed in the process of healing (the contraction of a cicatrix being directly dependent on the amount of granulations formed). To illustrate this point I may mention that the movements of the arm in Case 2 are quite free, and that in Case 6 there is no ectopion, although the whole cheek has been removed. The new skin is unsightly at first, but after a time becomes supple and movable over the deeper tissues; in fact, in some cases I have grafted directly over tendons without impairing their movements. Ordinary sensation quickly becomes established in the new skin, and after a few months it is difficult to find any difference between it and that of the surrounding skin.

Some sections of this new skin formed from Thiersch's grafts have been made for me by Dr. Abraham. They were taken from the patient in Case 2 when a recurrence was removed nine months after the original grafting. While in sections of cicatrices after healing by granulation one sees only layers of squamous epithelium resting on dense fibrous tissue, in sections of skin formed from Thiersch's grafts, on the other hand, there are numerous well-developed papillæ and a true cutis rather rich in cells. The epithelium, too, resembles that of normal skin; numerous vessels were seen in the new cutis, but nerve endings have not been demonstrated. This development of a new cutis is to be accounted for by the ingrafting of the tips of the papillæ with the epidermis, and explains the absence of cicatricial contraction after grafting. I think that all will agree that this method of treating lupus is more successful than the older ones, but time, of course, must elapse before one can say that a case is absolutely satisfactory, yet I am sanguine enough to believe that the treatment will be successful, for it is based on a sound clinical and pathological basis.

Note.—Since writing the above I regret to say that a fresh recurrence has occurred in Case 2, and that, too, in the centre of the cicatrix. At the first operation I noticed that the subcutaneous fat was altered in consistence, so I would suggest that the lupoid tissue had even at that time extended below the part removed. I do not think that the fact of this recurrence should be used as an argument against this method of treatment, but it should induce one to excise the parts more freely. Another *contretemps* has occurred in Case 8, where the lupoid tissue on the chin extended deeply, down to the bone. The cicatrix assumed a keloid condition, and after contracting slightly, became bound down to the bone; this caused eversion of the lip with dribbling of saliva, which, however, has been remedied by the transplantation of a flap of skin beneath the lower lip. This patient, too, returned to hospital with tuberculous tenosynovitis on the dorsum of the foot, which I operated on with a satisfactory result. Instead of the gauze protective tissue which I have used in nearly all the above cases I now propose to use next to the wound some gauze made out of spun glass, which has been supplied by Messrs. F. Walters and Co. I think that the grafts will not adhere to this, and so there will be no risk of detaching them during a dressing; at the same time the gauze, being of loose texture, will allow any blood or discharge to escape into the dressings.

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INTESTINAL OBSTRUCTION, DUE TO FÆCAL ACCUMULATION, ASSOCIATED WITH DISPLACED KIDNEY.

BY WALTER KIDD, M.D., B.S. LOND., M.R.C.S.

THE following cases which have come under my care during the last five years are, I think, worthy of record. They have all presented the characters of attacks of intestinal obstruction, due to fæcal accumulation, and have been found, while recovering, to be associated with a movable or displaced kidney at the seat of obstruction. There cannot be much doubt that in these cases the obstruction and the displaced kidney were related as to cause and effect. It will be seen that in Cases 3 and 4 the subsequent tumours, which assumed the features of displaced and very slightly movable kidney, actually composed the bulk of the original masses found at the commencement of the attack. In Cases 1 and 2 the kidneys were more movable, though not very freely so, and probably led gradually to the arrest of the contents of the bowel by a less direct pressure. In all the cases the patients recovered and presented no signs of malignant disease, Cases 1, 2 and 3 having been watched at intervals from two to five years, and Case 4 for two months after the respective attacks of obstruction. In all of them the accumulation was in the hepatic flexure or the commencement of the transverse colon;

consequently in all the cases it was the right kidney which was exercising pressure. In all the enlarged or displaced kidney was only found as the patients recovered. In Cases 1 and 3 the right kidney was found to be absent from the right loin, in Case 2 this was doubtful, in Case 4 the patient was too stout for this point to be ascertained. I cannot learn from such authorities as I have consulted, either on intestinal obstruction or displaced kidney, that this connexion which I suggest is generally taught. If it be as suggested, one would judge that the cases, in which this causation of obstruction of the intestine of this kind exists, should be tolerably frequent, considering the frequency of displaced kidneys, and the number of women who suffer from that affection and habitual constipation. The fact of the right kidney being twelve or thirteen times more frequently displaced than the left and the fact that the ascending colon and hepatic flexure are common seats for blocking of the bowel with fæcal matter would point to the likelihood of this form of obstruction being more common on the right than the left side of the abdomen. This is borne out by the four cases which follow.

CASE 1.—A widow aged sixty-two. Her general health was good, with the exception of her being subject to constipation. Increasing difficulty of action of the bowels was followed by a sudden attack of very acute abdominal pain, obstinate vomiting, and pyrexia. On examination a tender indefinite mass was found in the right hypochondriac region, extending to the umbilicus. There was no hernia or jaundice, or other sign or history of biliary colic. The pain was relieved with difficulty even with full doses of morphia hypodermically. By means of enemata and calomel the bowels were relieved and old-looking fæcal matter removed. In the course of a week the pain, pyrexia, and vomiting were subdued, and a soft irregular mass was still felt on the right side, pitting on deep pressure. This disappeared after many months of careful regulation of the bowels by dieting and aperients. As the original mass was removed a displaced right kidney, fairly movable, was found to occupy the position of the fæcal tumour. The latter has long since disappeared and the kidney remains as before. The patient is now well, five years after the attack.

CASE 2.—A married woman forty-three years of age. The patient's general health was good except for hepatic functional disorder and constipation; the latter had increased of late. She was seized with acute abdominal pain, pyrexia, and vomiting, symptoms similar to those of Case 1, but less severe. A tender mass was felt in the right hypochondriac region, irregular and fairly soft. The symptoms were quickly subdued by morphia, starvation, and hot applications, followed by frequent doses of cascara. Slowly the mass became smaller, pitting on deep pressure, and was evidently a fæcal tumour. This was quite removed and, as the patient recovered, she was found to have a movable right kidney occupying the position of the mass found at the commencement of the illness.

CASE 3.—This patient (a female) was forty-two years of age. She had been subject to "bilious attacks" for a few years, characterised by pain and vomiting, and followed by "diarrhœa," at uncertain intervals. When seen she was suffering from acute abdominal pain, distension, pyrexia, and vomiting, which became for a short time fæcal. These symptoms slowly subsided by means of similar treatment to that employed in the other cases, opiates, starvation, and enemata, followed by frequent doses of cascara and decoction of aloes. A mass was found occupying the right hypochondrium and the situation of the transverse colon, lying across the abdomen; it was very tender and pitted on pressure at the upper border. This patient recovered eventually after three or four weeks of somewhat severe illness. Considerable diminution in the mass was observed and the outline became defined, pitting on pressure ceased, and the swelling became more smooth and hard. This was evidently an enlarged and displaced right kidney, only slightly movable, forming part of the original mass. This remains as before after two years; the patient is somewhat delicate and takes aperients regularly. She is now able to follow her usual employment.

CASE 4.—A single woman seventy-two years of age. The patient has been subject for some years to slight attacks of abdominal pain, chiefly in the region of the transverse colon, with or without sickness, and followed by loose actions of the bowels. She was seized with sharp abdominal pain above the umbilicus, vomiting, distension of abdomen, and slight pyrexia. An irregular mass was found in the right hypochondrium; it was tender and pitted on deep pressure. The attack was soon relieved by opiates, starvation, and enemata. Large fæcal masses were removed and the original swelling became daily smaller and less tender and the outline more defined and smoother. It was then found to be a nearly fixed, displaced kidney, somewhat enlarged. This remains and the patient keeps herself in health by taking aperients regularly and by very careful dieting.

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DESTRUCTIVE ULCERATION OF THE VAGINA.

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THE various lupoid forms of ulceration of the vulva, although not thoroughly worked out as regards the peculiar microbe which no doubt causes them, are nevertheless well known, and have been fully described, especially by the late Dr. Matthews Duncan. The same writer also wrote upon small patches and ulcers of the vulva with tendency to hæmorrhage. Ulcerations confined to the vagina have received less attention, although cases occur of great importance. Two forms of extensive ulceration of the vagina have come under my notice. Both of them are most intractable in their nature and almost unamenable to any treatment, except improvement of the general health. The first form is, so far as I have seen, confined to the lower part of the vagina, the mucous membrane of which it destroys completely on its posterior surface. The second form is confined to the upper part or roof of the vagina, and is more superficial, but very chronic. Neither of them is malignant—i.e., cancerous. I can find no account of either of these diseases. They have no connexion with corroding ulcer or with any of the so-called lupoid forms of disease, as they are both unattended with any up-growth or hypertrophy. Of the first form I have only seen two cases, but as both were almost precisely alike I will, for facility of description, call it a form or species of disease. I can best describe it by giving a case.

CASE 1.—A woman aged fifty-five, when in church, felt a slight draught of cold air in the face. This originated an inflammation of one eye, ending in its disorganisation, and it was removed by Mr. Secker Walker in the spring or summer of 1892. In August of the same year she came to me with complaint of uneasiness about the vagina, and I found an extensive and slowly spreading ulceration. This gradually extended almost round the whole lower part of the vagina. At first it consisted of four or five narrow ulcers occupying the bottom of the folds of the swollen and red mucous surface. The lower edge of each of these reached exactly to the lower margin of the true vagina, and they extended upwards to not quite half the length of the vagina on its posterior surface. These ulcers gradually coalesced, leaving, however, little tongues of undestroyed mucous membrane marking their original number. The edges were not excavated, but clear cut to the full depth of the ulceration. The mucous membrane appeared to be entirely destroyed and the tissues beneath laid bare. The surface was dry in appearance, the slight semi-purulent secretion upon it being hardly visible except by close inspection. The colour was a deep bluish-red. There was no slough and the disease progressed by a slow molecular necrosis. It was not painful unless the parts were stretched for the purpose of examination. There was not the least thickening of the edges of the ulceration or any up-growth whatever, either in the surface or in any neighbouring part. Having thus destroyed the lower half of the vagina except the anterior wall, the disease then remained perfectly stationary for about four months. No local treatment had any effect upon it, but lightly packing the part with lint, steeped in a weak carbolic and zinc lotion, seemed to answer best. Both nitric acid and nitrate of silver were cautiously tried at spots on the edge, but they produced no tendency to heal. Meanwhile the patient was taking quinine, wine, and as generous a diet as she could digest. Six months before she came under my care she had had, as stated,

one eye extirpated for hopeless inflammation of a low type. She now began to show symptoms in the remaining eye which made me feel that some radical change must be made or this eye would follow the fate of the other one. I insisted upon her leaving the town altogether, which she did in a few days, being thoroughly alarmed about the other eye. In the country her general health improved at once, and after a considerable time the vaginal surface began to heal by a thin pellicle of epithelium creeping over the denuded surface, and when I last saw her about Christmas, 1893, it was as nearly as possible all healed. This woman lived for years in a cellar kitchen in the lowest part of the valley. Here water is always found at a depth of about twenty feet below the surface of the ground which consists of loose gravel. At this time the patient kept no servant, and she worked very hard in the performance of her household duties, as she had a large family. When I knew her she was living in a good part of the town and was comfortably off. But the mischief had been done, and I take it that the impairment of health from the causes named was the origin of both the destruction of the eye and of the vagina. It naturally occurred to both Mr. Walker and myself that syphilis was the cause of the disease, but there was no evidence of this whatever, and on the contrary an absence of anything to even cause suspicion of it. I have seen one other case of this disease in a patient in my ward in the Leeds Infirmary which occurred about the same time as the one related, and the ulceration or molecular death of the vaginal wall precisely resembled that in this case, but it was not so extensive. There were the same sharp convex borders to the ulceration at its lower margin, and it stopped short of the vulvar mucous membrane exactly as in the case described. It, however, did not extend so far round the vagina, but we could not get it to heal, and the patient went out with it unhealed. The case was seen by Mr. Firth, the resident obstetric officer, and by many students.

I will now pass on to the other form of ulceration, which is of a milder type, but almost equally intractable to treatment. The vaginal wall is really a skin structure with papillæ covered with a layer of squamous epithelium. This latter, in mounting a section for the microscope, takes the dye differently, and is usually here and there separated from the papillæ underneath by the manipulations of dyeing and mounting, which shows that the union is not very intimate. It seems to me, from examining sections of this milder form of ulceration, that the squamous epithelium disappears and the papillæ are eroded but not destroyed. The disease is not very common, although in the form known as senile chronic vaginitis having a "mapped appearance," as Dr. Matthews Duncan describes it, is not unfrequently met with, but I take this to be a separate disease, and one not usually attended with ulceration. The form of ulceration I am describing attacks, as far as my experience goes, the vaginal-roof and upper part of the vagina only, and is never visible below. It is hardly recognisable by the finger alone, as the surface is smooth and soft. By the speculum it is seen to be of a dull red colour, with imperfectly defined edges. The sensation this communicates to the finger is not at all like that peculiar to very superficial squamous epithelioma in an early stage. The epithelioma gives to the finger passed over it a slightly crisp, hard feel, whereas the ulceration in question is peculiarly soft, otherwise some rare cases of epithelioma of the vagina closely resemble it, spreading at the edges widely in every direction, but implicating merely a film of epithelium. The edge of the epithelioma is slightly raised and very sharp and defined; that of the ulceration is perfectly level and shades off into the healthy surface without any sharp boundary line.

CASE 2.—A woman sixty-two years of age was admitted into the Women and Children's Hospital twenty years ago (I was then the junior surgeon there) with a large patch of disease, such as described, covering the whole of the vaginal roof and the posterior lip of the uterus on its vaginal surface. I had not then had the experience I have had since, and took it to be malignant. After consultation with my two senior colleagues, who agreed with me, I cut away the whole vaginal roof and shaved off the surface of the posterior lip of the uterus to about half its depth, but without opening the peritoneum. The result was a gap which I could not bring together by sutures, but observed that the parts laid fairly close when not disturbed by the introduction of the finger. The wound healed well, and the patient went home apparently free from disease. I have not seen her since. I subsequently, by microscopic examination of the part removed, found that it was not malignant, but a superficial spreading ulceration destroying the epithelium and partly the papillæ. I still have the sections in good preservation. This was the first case I saw, and since then, from time to time, but very rarely, I have met with similar cases, but none so extensive. Occasionally there is tendency to hæmorrhage. On June 14th we had one of these cases amongst the infirmary out-patients, and it was shown to my class of students. I have, however, not noted any of these cases except the one related, and prefer therefore to relate one by an independent observer, Dr. H. Briggs of Liverpool, who has kindly contributed his notes of the case. Dr. Briggs mentioned the case at a recent meeting of the North of England Gynæcological Society. It somewhat differs from the cases I have seen in being painful, and hæmorrhage is more common in smaller and tuberculous ulcers than in this form of disease.

On Oct. 3rd, 1893, Dr. Paton, of Rock Ferry, Cheshire, sent to me a widow aged fifty-one years, suffering from vaginitis. One of the symptoms was rather free hæmorrhage and the physical character of the ulceration was peculiar. The patient gave the following account of herself. She was the mother of twelve children and had had one miscarriage. Menstruation had been regular up to its cessation in the fiftieth year of her age. For twelve months there was not any vaginal discharge. She had not suffered from any pelvic complaint until this illness began two months ago (the uterus was in normal position and there was no cystocele). She had not worn a pessary or made any application to the vagina. There was no clear evidence of an exciting cause of the ulceration. At first the discharge was white and then whitish yellow; its quantity was considerable. A fortnight after the leucorrhœa appeared bleeding set in, and continued daily without intermission. The hæmorrhage was sometimes copious, and occasionally there were clots on the diaper. She was haunted with the fear of cancer, of which her husband had recently died. She was assured the disease was not cancerous. The bladder was irritable. Rest had little influence on the pain. After meals and during the night the pain and irritation were always worse. She was pale and thin; there was a distressed care-worn look—proof of how seriously the general health had suffered. On local examination by a Sim's speculum *in situ* irregularly shaped ulcers were seen which reached from the anterior lip of the cervix to the meatus urinarius; the ulcerated surfaces were not raised; the edges of the ulcers were thin and were correspondingly little raised above the surfaces of the ulcers. A dull, white, granular film thinly covered the surfaces of the ulcers. When the film was disturbed by a pledget of cotton-wool bleeding occurred. Contact of the finger produced the same result. The ulceration was superficial. The edges showed a pale dull-red congestion which faded gradually into the mucous membrane around. There was neither the bright redness of acute nor the lividity of chronic inflammation. She remained in the hospital for five weeks. The disease was limited to the upper vaginal wall throughout its whole course. Locally, with cleanliness and packing the vagina daily improvement set in. She was kept in bed. A liberal diet of plain food was given.

I can find no reference whatever to a disease such as has been described under the first so-called form of ulceration, and am inclined to think it is now for the first time described. The extensive but superficial form of ulceration differs also from anything described by Dr. Matthews Duncan or any other writer, but the case given by Dr. Briggs of Liverpool resembles them in the occurrence of hæmorrhage. I can give no absolute proof of it, but think there can be little doubt that both the forms of ulceration described are produced by cocci or bacteria, which would be powerless for mischief but for the feeble resistance of the tissues owing to poor general health from advancing years and poverty with deficient nourishment. Possibly the microbes so acting are always present in the vagina in health, but are then harmless. The generative outlet or inlet of the body differs from the others in not having its surface scoured by friction, and injurious microbes are therefore allowed to remain at rest and take root. This is especially the case after the menopause, and the stagnant state of the secretions is not improbably a factor in the occurrence of such diseases as those described.

Clarendon-road, Leeds.

THE HYDERABAD CHLOROFORM COMMISSION:

A CRITICISM OF ITS METHODS AND RESULTS.

BY J. FREDK. W. SILK, M.D. LOND.,
ANÆSTHETIST TO GUY'S AND KING'S COLLEGE HOSPITALS, ETC.

UP to the present time, as far as I am aware, no opportunities have been afforded for criticising in public debate the methods and results of the Hyderabad Chloroform Commission from a general point of view. Such discussions as have hitherto been held have turned mainly upon the physiological aspect of the question, but as the issues involved are very great it is of no little importance that the matter should be discussed from every possible standpoint. A question which one is often asked is, Why was this commission appointed? The answer is to be found in Section 5 of the report as published in THE LANCET of Jan. 18th, 1890, in which we read: "The first commission was applied for by Surgeon-Major Edward Lawrie because, having always believed in the truth of Syme's teaching, he desired to show by experiments upon dogs that in death from chloroform the respirations always stop before the heart," and from a subsequent part of the same section I gather that the second commission was instituted to confirm by physiological experiments the results of the first. Surgeon-Major Lawrie was appointed president of the second commission. Practically, therefore, the main conclusions at which the commission arrived had already been anticipated before any evidence had been brought before them, and it cannot be a matter of surprise to anyone that a commission appointed at the instigation of an individual holding certain definite views, and with that same individual as president, should produce a report consonant with those views, or even, as in this case, carrying those views a step or two further. Another question which one is often asked is, What was the constitution of the commission? In its final form the commission consisted of Surgeon-Major Lawrie (President), Dr. Lauder Brunton, Surgeon-Major Bomford, Mr. J. A. Kelly, Surgeon Hehir, Dr. Rustomji, and Mr. A. Chamarette. The commission as thus constituted is open to the very grave objection that, as far at any rate as I have been able to ascertain, not one of its members can claim to have had any recent or extended experience in the administration of chloroform elsewhere than in India, and it is, I believe, well known among Indian surgeons that the natives take chloroform remarkably well and that deaths, though not absolutely unknown, are very rare. For instance, Dr. Crawford, of the Madras General Hospital, says that the difference in mortality between India and Europe is not due to superiority of method, but to absence of fear and vast difference in temperament. Habit, custom, and climate all tend to lessen the native's fear of losing consciousness. Such being the origin and such being the constitution of the commission, it becomes more than usually imperative upon us to hesitate to accept their conclusions until the evidence has been carefully considered and confirmed by other observers. And what are the results arrived at by the commission? As far as I can make out they are as follows: (1) that in death from chloroform the respirations always stop before the heart; (2) that chloroform has no direct action upon the heart; (3) that chloroform anæsthesia alone is free from risk; and (4) that it is useless and dangerous to take the pulse as a guide to the effect of chloroform.

The evidence upon which these conclusions are arrived at is partly physiological, partly clinical. Not only has the physiological evidence received no direct confirmation, but such observers as the reconstituted Glasgow Committee, Professors Wood and Hare of Philadelphia, Professor McWilliam, Drs. Gaskell and Shore, and other eminent physiologists have expressed opinions which are the exact opposite to those of the commission. Surgeon-Lieutenant-Colonel Lawrie has laid much stress upon the indirect confirmation afforded to the views of the commission by the apparent similarity between the Hyderabad tracings and those produced by Professor Victor Horsley in cases of gunshot wounds of the brain, but even Professor Horsley hesitates to go so far as to assert that in death from chloroform the respirations always stop before the heart or that chloroform has no direct action upon the heart, and it is obvious to everyone that we cannot decide such a point as this on the strength of curves produced under such entirely different conditions. But apart altogether from the interpretation of "curves" obtained in the physiological laboratory, it appears to me that these physiological experiments taken as a whole tend to prove how intimate are the relations between the cardio-vascular and the respiratory systems, and between the heart and vaso-motorial functions. If all these elaborate precautions are necessary, even in the laboratory, to differentiate the effects of chloroform upon one system from those on the other, it must surely be next to impossible to do so on the operating table, and from this, I think, the most obvious deduction is that we should not confine our attention to any one particular function.

The clinical evidence upon which the commission relied appears to have been almost exclusively that furnished by Surgeon-Lieutenant-Colonel Lawrie in his statement that neither in the experience of Professor Syme nor in his own had a fatal case occurred for upwards of forty-three years. It is true that the report states that the commission had searched the records of fatal cases, but apparently only with the view of ascertaining whether or not the respirations had alone been watched, and as no such statement was definitely made in any individual case the searchers jump to the conclusion that these deaths only tend to establish their contentions! They have not, moreover, had any experience themselves in the matter, and cannot, therefore, give any positive evidence or views as to the cause of death in any one instance, but content themselves with rejecting the opinions and views of actual observers. With regard to Surgeon-Lieutenant-Colonel Lawrie's statement above alluded to, I would point out, in the first place, that no actual figures are given and that no actual records appear such as could be fairly compared with the figures given by Dr. Julliard of Geneva, Dr. Ormsby of Dublin, the St. Bartholomew's Hospital statistics, the returns of the Registrar-General for England and Wales, and others. Professor Syme's experience, too, must be discounted a good deal because during his lifetime the number of operations was much fewer than at the present day and the number of administrations less both absolutely and relatively, and it follows therefore that an experience of twenty or thirty years in the time of Syme is not equivalent in point of numbers to a modern experience of much more than five or ten years. The same remark, too, applies to Surgeon-Lieutenant-Colonel Lawrie's seven years' English work, and with regard to his subsequent experience this, as I have already pointed out, is open to the exception that it is entirely Indian. In comparing figures on this point I think it is a matter of no little importance that there should be records of cases that die on the operating table or within a few minutes of being put back to bed, whether from "shock" or otherwise. I make this suggestion because there is a general impression that many of the deaths which in England are returned as being due to chloroform or other anæsthetic are, and in many instances rightly I think, recorded elsewhere as being due to shock. The records published at intervals during the last few years by Surgeon-Lieutenant-Colonel Lawrie, excellent as they are in many ways, do not really help us much in this inquiry, inasmuch as they appear to ignore the existence of the circulation or the pulse altogether; we have just recently been promised from the same source a large number of records in which the omission referred to is rectified, and although it is impossible to criticise these records before they actually appear I think it may be said that their value will be greatly enhanced if the pulse observations are taken by some perfectly impartial observer in no way connected with the commission nor a student of the Hyderabad school; better still would it be if the record could be made in some mechanical way, as by a recording drum.

So far from the views of the commission being confirmed clinically by others, we find on the other side of the shield the records of a host of observers—hospital surgeons, general practitioners, anæsthetists, and others—who agree in thinking that, in some instances at any rate, chloroform kills through the heart. For instance, without very carefully searching the records I find that in the year 1891 there are at least four cases reported in which it is most distinctly stated that, in the opinion of those actually present at the bedside, death seemed certainly due to syncope. I have chosen a year subsequent to the publication of the report because I think it may fairly be concluded that the observers were fully alive to the point in dispute—i.e., whether or not chloroform ever killed by its action on the heart. One

admits, of course, that many deaths are due, either directly or indirectly, to carelessness, and that many deaths are imperfectly recorded; but one cannot surely state that this is the case in every single instance, and if we admit of even a single exception the contentions of the commission fall to the ground.

So far, then, as it appears to me, the commission have entirely failed to prove contentions (2), (3), and (4), and have only proved contention (1) so far as it may be taken as proof "that in death from chloroform the respirations usually or frequently stop before the heart," and this is a fact which was well known to and acted upon by anæsthetists before. The commission appear to be labouring under a misapprehension as to the state of teaching in England in respect to chloroform. I submit that for a good many years before the commission was ever heard of those responsible for the teaching in the majority of medical schools in this country held and taught that in the administration of chloroform the primary and chief attention should be directed towards the respirations, and that at the same time we should watch the circulation by observing the colour of the face, lips, ears, and other exposed parts, and should occasionally note any alterations that may take place in the character of the pulse or size of the pupil. For instance, in a well-known work on Anæsthetics published in 1888 it is stated that "throughout chloroformisation the respiration must be *constantly* watched" (Buxton). I, too, and I believe most other anæsthetists, have usually added a rider to this teaching to the effect that there was no royal road to the safe administration of chloroform, and that if there *was* a key to the situation it would be more likely to be found in the word "care" than in the adoption of any shibboleth. No evidence that the commission has brought forward has led me to change this teaching except, perhaps, to insist more strongly than ever upon the abolition of shibboleths.

In conclusion, I wish to enter a very emphatic protest against the methods adopted in promulgating the views of the commission, as I believe that not only are these methods bad in themselves from a scientific point of view, but I think that they have actually led to disaster. As far as my information goes the first intimation of the existence of the commission was obtained through the medium of a telegram to the public press, in which it was announced that, as a result of their labours, they had discovered a perfectly safe method of administering chloroform, and it was not for nearly a year that any details were vouchsafed to the medical world. From the date of the publication of the report (January, 1890) up to the present time, not only in the medical press, but in the morning and evening papers, in the society and other journals, in season and out of season, the drum of the Hyderabad Commission has been beaten with much vigour and force. If mere notoriety could ever be held to prove a scientific truth then, no doubt, the principles advocated by the commission have been proved up to the hilt. But unfortunately, as might, I think, have been foreseen, the very opposite effect has been produced. The methods in question have led to an impression that by adopting the Hyderabad shibboleths perfect safety could be ensured, and in fact, as I believe one paper put it, "the administration of chloroform by the new method is no more dangerous than drinking a glass of whisky." Careless and haphazard administrations have been the result, and as a consequence I find that, whereas the chloroform deaths for three years prior to the publication of the report averaged thirty-three, in the three subsequent years this average has risen to forty-eight, and I can conceive of no other reason which can be adduced to explain how this increase is so absolutely coincident with the report in question. On this point Surgeon-Lieutenant-Colonel Lawrie deserves our sympathy, for this species of advertisement must be utterly repugnant to all his professional instincts; but whoever may be responsible there is no doubt that its continuance will lead men to liken the Nizam to that "Rustum Beg of Kolazai" whose career is celebrated in Rudyard Kipling's "Legend of the Foreign Office."

Weymouth-street, W.

WE have been asked to notify that the National Temperance League has arranged for a breakfast to members of the British Medical Association at Bristol, on Thursday, Aug. 2nd, under the presidency of Dr. E. Long Fox. The secretary, Mr. Robert Rae, 33, Paternoster-row, E.C., will be glad to hear from members of the Association who wish to be present.

PEAT WOOL IN SURGERY.

BY HAROLD BURGESS OSBURN, L.R.C.P. LOND., M.R.C.S. ENG., D.P.H. CAMB.

FOR many years there has been a gradually growing demand on the Continent for peat in a coarse powder for use as an absorbent and deodorant of excreta, for by its use the dry system of sewage removal, obtaining so largely abroad, was found to be deprived of the various and obvious objections thereto. The reason of its growth in favour for this purpose was found to be its power of absorbing liquids (nine times its own weight of water), of causing the liquids which it has absorbed to be resistant to putrefaction, and of fixing and preserving the ammoniacal products present in sewage. The two former of these properties soon attracted the attention of the surgical world abroad, and as long as ten years ago a monograph was written in Germany advocating its use as a surgical dressing on account of these very properties. As may be easily imagined, surgical experiments soon followed. These at first were of rather a crude nature. Actual moss peat in the form of a coarse powder was sewn up in bags of carbolised gauze and used exactly as we have seen of late years here wood wool used as a dressing for abdominal cases by certain operators. One surgeon in particular used it in over a hundred cases of major operations, not relying upon its assumed antiseptic properties, for he used iodoform and carbolic acid as in his usual procedure, but merely substituting these bags of peat for the masses of carbolic gauze and absorbent wool with which it was customary to envelop a recent wound, and with excellent results. Even these rough experiments greatly impressed observers, it being found that, whereas previously even large quantities of absorbent wool did not prevent the wound discharge from coming "through" and the masses of soaked wool, if left unchanged, from consequently becoming rapidly septic, when peat dressings were used the serum and blood were all absorbed, and even after many days the peat bags thus soaked were perfectly free from decomposition. At the Surgical Congress in 1884 these properties caused an eminent German surgeon to draw particular attention to peat as a dressing in army surgery, it being then stated that it would be possible with peat dressings to transport the wounded for as long as fourteen days without redressing if the wound were made aseptic and peat dressings applied in the first instance. After this the whole subject was thoroughly investigated, and a good deal of literature on peat appeared abroad, though, curious to relate, very little appeared in the English press at the time. More recently the invention of processes for extracting the fibre from peat, free from dust and débris, and the discovery of the fact that these fibres will form a wool of a firm, elastic nature have given a great impetus to the use of peat in surgery. So great, indeed, has been the favour this product has been regarded with abroad that the French War Department has now definitely adopted it to replace the gauzes and wools which have been hitherto used in the military hospitals. Peat fibre, as now prepared for surgical purposes, is a fine, brown, glossy wool with a faint aromatic smell. It feels a little rougher than fine, absorbent wool, but makes a more comfortable dressing as it is much more elastic. Microscopically one would, of course, expect to find the more resistant portions of vegetable tissues in a dry and shrivelled condition. Various different observers have described different forms of cells in peat; one especially draws attention to cells provided with stomata, through which fluids flow in and fill the empty cell cavity when the fibre is immersed. In the samples which I have personally examined the microscopic structure was exceedingly simple. The fibres were macerated in a solution of potash, teased out, and examined with a ⅛ in. objective. It was found that they consisted almost entirely of very long and very narrow cells with finely tapering ends. The fine peat fibres consisted of bundles of from fifty to one hundred of these cells, which were from one-fifth to one-quarter the diameter of fine cotton fibres. They were perfectly homogeneous and glassy; they had a minute cell cavity which appeared as a fine dark line, with no trace whatever of stomata. Besides these, every here and there was a much broader cell with transverse marking, resembling the scalariform vessels of plants, and there were a few polygonal vegetable cells adherent to these. The most striking

points were the small size of the fibres, their great length transparent, homogeneous structure, and regular grouping.

With regard to the reputed antiseptic qualities of peat careful investigation has quite settled the fact that peat contains a substance which does definitely retard the development of micro-organisms. This substance or substances can be extracted by steeping the peat in water and is of a faint acid reaction, but its exact composition has not been worked out. There is, however, some power of preventing putrefaction present in peat greater than is accounted for by the possession of this substance, and it is surmised that it is the fact of the absorbed fluids being actually taken into the empty cells and held there out of contact with air that to some extent accounts for this. No claim is made for it being in any sense a bactericide, but even the above retarding effect upon germ growth is a power not possessed by any other dressing material of itself. If any stronger antiseptic be needed peat can be most effectively, on account of the arrangement of its fibres described above, impregnated with perchloride of mercury or any other antiseptic. This has been done in France, but it is most generally used there as an outer dressing and is consequently not so treated.

To turn now to the record of actual surgical cases where it has been used. Professor Lucas-Championnière gives a most graphic account of the comfort experienced in cases of extravasation of urine necessitating free incisions after dispensing with ordinary dressings and packing with peat wool. To none of us who have had day after day to dress one of these horrible cases will not this come home. The same writer goes on to describe numerous major operations where even with much oozing one single peat dressing was kept on until the wound had united. In my own small experience peat wool has been used for eighteen months in the ordinary routine of a country practice, including a good deal of minor surgery, and with very good results. In one case of cellular erysipelas, involving the entire leg and obliging numerous long and deep incisions, peat wool was entirely employed and fully justified its reputation. To recent and clean wounds a layer of perchloride gauze was first applied and then a pad of peat wool, and in no case was more than one such dressing needed. One noticeable property was the way liquids became diffused through the whole pad of peat wool instead of coming "through" at one spot, as is the case when ordinary dressings are used. For padding splints nothing better can easily be imagined; one gets an elastic pad which has no tendency to felt and which does not get sour and ill smelling however badly it be treated.

With regard to its disadvantages there are two: firstly, a tendency for the finer fibres to break if handled much, by which a little dust is produced, and for this reason it is not recommended as an immediate application to operation wounds. The other disadvantage is its brown colour; but in actual practice neither of these forms any noticeable drawback to its usefulness. In conclusion, I think there will be no dispute that surgery has here an exceedingly valuable adjunct, the discovery of which raises that feeling common to the announcement of all discoveries—of surprise that it should not have been thought of before. There is no doubt that it can be supplied at a much lower cost than absorbent wool, &c., and also no doubt that it possesses certain definite advantages over that substance; and, in view of its general adoption abroad, it certainly demands the fullest and most careful trials and consideration here. If it finds favour here the cost of surgical dressings—an item of considerable magnitude in hospitals—will be largely reduced, while the comfort and safety of the patient will be actually increased.

Bagshot, Surrey.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

DISLOCATION INTO THE SCIATIC NOTCH.

By H. LITTLEWOOD, F.R.C.S. ENG.,
HON. ASSISTANT SURGEON TO THE GENERAL INFIRMARY, LEEDS, ETC.

A MAN seventy-two years of age was admitted to the General Infirmary, Leeds, under my care on June 25th, with the following history. He was standing on a cart, helping to load it with hay, when the horse became restive, and the patient was thrown out of the back of the cart, falling on his right buttock. He experienced great pain and was quite unable to walk. On admission the right hip was slightly flexed, rotated in, and adducted, so that the right knee rested on the one of the opposite side. There was no difference in the two sides on measuring from the anterior superior spine to the lower border of the patella. No shortening was made out by Nelaton's line, but on flexing the hips and knees well-marked shortening on the right side was seen. The head of the femur could be easily felt beneath the glutei muscles on rotating the limb. Under chloroform the pelvis was fixed and the dislocation easily reduced by flexing the hip to a right angle and lifting upwards. There are very few recorded cases of this accident at such an advanced age. Mr. Pollock published two cases at the age of seventy-two which were successfully reduced, and Malgaigne met with a case at the age of eighty-five.

Park-square, Leeds.

CONGENITAL ABSENCE OF TOES.

By VAUGHAN PENDRED, M.R.C.S. ENG., L.R.C.P. LOND.

THE accompanying engraving is a full-sized sketch (taken shortly after birth) of the feet of a male infant born last February. The metatarsals and phalanges of both outer toes are missing. I am unable to detect any other deformity

save the inequality between the second and third toes of the left foot, neither of which is well formed. The infant shows no other peculiarity and is strong and healthy. The irony of fate has caused him to be the offspring of a policeman.

West Hill, Wandsworth.

CASE OF URTICARIA HÆMORRHAGICA.

By H. J. COOPER, M.A., M.B. CANTAB., L.R.C.P. LOND., M.R.C.S. ENG.

THE following case of urticaria hæmorrhagica seems to me to be not unworthy of record owing to the unusual extent of subcutaneous hæmorrhage and associated œdema. The patient was a widow fifty-three years of age. The eruption first appeared on April 11th without assignable cause, with the exception that she had not felt so well as usual for some time previously and that she had partaken of cucumber for supper on the previous evening. When first seen on the 13th she complained of irritation of the skin, and there was swelling of the face, especially of the eyelids and the upper lip. On the neck there were some red raised spots and blotches, but no regular wheals were to be seen. On the thighs, chiefly on the inner and posterior aspects there were a number of large wheals with red areolæ, and the inner sides were covered with hæmorrhages having a mottled arrangement, giving the appearance of extensive bruising; wheals were said to have been present at the sites of these hæmorrhages. The temperature was 98·8° F., the

tongue was furred, and the bowels were confined. On April 14th the temperature was still 98·8°, the pulse being 108 (full). Pain was complained of after taking food. There were fewer wheals and apparently no fresh ones. The legs were examined on this day for the first time, when the shins and dorsal aspects of the feet were found to be œdematous, and in these regions several large purple blotches were seen, not fading on pressure; the largest was seven inches in length and extended along the outer side of the right leg and foot. Pain was complained of when pressure was applied over these areas. No wheals were present in these regions at the time of examination, but the patient thought that there had been some previously. The œdema of the face had now subsided. The urine was normal. By April 17th no fresh hæmorrhages had occurred, and there was now only slight evidence of the hæmorrhagic patches. The chief interest in this case seems to be the extent of the hæmorrhage (which apparently was not limited to the urticarial wheals, as appears usually to be the case) and also the extensive œdema. There was no evidence of hæmorrhage from mucous membrane as recorded by Dr. Crocker in similar cases. No pains were complained of at any time in the joints, and there is no reason to suspect a rheumatic origin. There was abundant evidence of gastro-intestinal disturbance, which apparently was the exciting cause.

South Croydon.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

ST. THOMAS'S HOSPITAL.

TWO CASES (ONE OF THEM FATAL) OF RUPTURE OF GONORRHŒAL PYOSALPINX, RESULTING IN LARGE INTRA-PERITONEAL ABSCESS, OPENED BY ABDOMINAL SECTION.

(Under the care of Dr. C. J. CULLINGWORTH.)

THERE has been a tendency shown during the past year or two on the part of some gynæcologists to minimise the influence of gonorrhœa in the production of pyosalpinx. It must always be difficult to give an accurate percentage of the various causes of this dangerous disease, but cases such as the following make it only too evident that the consequences of a neglected gonorrhœa may be most disastrous. It is difficult to make patients understand the importance of obtaining a complete cure of the condition, but our knowledge of the after-results which may follow neglect should cause us to urge most strongly the necessity for this. The need for operation in the cases described by Dr. Cullingworth will hardly be questioned.

CASE 1.—On Feb. 12th, 1894, a woman aged forty-five, but looking ten years older, was brought to St. Thomas's Hospital in an ambulance car and admitted under the care of Dr. Cullingworth. She had been ill in bed for three months and was anæmic, emaciated, and in an extremely exhausted condition. For some days previous to her admission she had declared herself unable to take any form of nourishing food and had taken nothing but brandy-and-water in small quantities. At the lower part of the left side of the abdomen there was a prominent fluctuating swelling, which was regarded as being in all probability an abscess connected with old-standing pelvic disease, from which she was known to have suffered. The following history was elicited. She had been twice married, but had never been pregnant. Two or three years after her first marriage she was for some time under medical treatment for a vaginal discharge which she described as having been "like matter." In November, 1885, she had an attack of pelvic inflammation, attended by the gradual formation of an abdominal swelling, which was diagnosed by a surgeon as a "suppurating ovarian cyst." She was told an operation would be necessary as soon as she had improved a little in health and recovered from the effect of recent troubles. She saw the surgeon subsequently, and was then told that no operation would be required. On March 23rd, 1886, she was examined by her own medical attendant, who found the uterus fixed, but failed to discover any sign of the tumour. She was, in fact, at that time practically well. In that year (1886) her husband, who had long suffered from stricture of the urethra, died suddenly from aneurysm. They had been married about sixteen years. She married again in 1889, but in a few months she was separated from her husband, and had not lived with him since. She remained well from 1886 up to the commencement of her present illness in November, 1893, when she was seized with severe pain in the lower part of the abdomen. Mr. Scott Battams of Lavenderhill was called in, and found her to be suffering from pelvic peritonitis, due, in his opinion, to inflamed uterine appendages. There was a large, hard, fixed mass in the pelvis. The temperature varied from 99° to 102° F., the pulse from 85 to 95. On Dec. 18th Dr. Cullingworth saw her in consultation with Dr. Ward of Richmond (her former medical attendant) and Mr. Scott Battams, and the following note was made:—"Patient has the appearance of a woman of fifty-five. There is a swelling in the lower part of the abdomen to the left of the middle line, with fairly well-defined upper limits half-way between the umbilicus and the pubes. The swelling causes no prominence of the abdominal wall. It is dull on percussion and very tender. The vagina is tender. A hard, tender, irregular mass is felt in both posterior quarters of the pelvis and in Douglas' pouch; the mass on the right side feels to be larger than that on the left." The diagnosis then made was "old gonorrhœal salpingitis, with recurrent pelvic peritonitis." Operative treatment was advised. The patient remained in a variable condition for three weeks, one day up and fairly well, the next day in bed, and so on. But on Feb. 2nd, 1894, Mr. Battams wrote to say that the patient appeared to have fresh attacks of peritonitis; the lower part of the abdomen was now swollen, motionless, rigid, and extremely tender. The pelvis seemed pretty well blocked. Her general condition was very unsatisfactory; she was anæmic, wasted, and exhausted. She had almost daily attacks of vomiting. No signs of the presence of pus were discoverable externally. He thought the case was evidently tending to a fatal issue, and was in doubt whether an immediate operation offered any reasonable hope and whether she was in a fit state to be removed if necessary. Dr. Cullingworth advised that arrangements should be made for her removal to the hospital and ten days later she was admitted. Her general condition on admission has been already described. The swelling in the lower part of the left side of the abdomen reached upwards to an inch above the level of the umbilicus. It was dull on percussion, the upper limit of dulness extending from an inch above the umbilicus on the left to the level of the umbilicus in the middle line, and from that point along a line drawn from the umbilicus to the anterior superior spine of the right ilium. Vaginal examination showed the uterus to be lying in front and to the right of the middle line, the fundus being situated midway between the level of the umbilicus and Poupart's ligament. The cervix was drawn upwards, the os externum being above the symphysis pubis. There was no depression of the lateral fornices. In Douglas' pouch there was a hard, irregular swelling, having apparently no direct connexion with the abdominal swelling. The bowels were much relaxed, the tongue coated, the pulse 100 and feeble, and the temperature 100°; the urine was loaded with urates and contained no albumen. The condition of the patient improved a little during the two following days. She was able to take liquid nourishment. The diarrhœa continued. On Feb. 15th an incision was made in the middle line below the umbilicus four inches in length. On opening the peritoneum some unhealthy omentum presented itself. During the separation of some firm omental adhesions on the left side a quantity of thin, unhealthy, flaky pus of very ill odour escaped, whereupon the fluctuating abdominal swelling disappeared. The pelvis was now explored with the fingers and on separating some adhesions behind the uterus there was another escape of flaky pus of unmistakably fæcal odour. An assistant was therefore directed to pass his finger into the rectum as high as possible, but no fistulous communication was detected. Some old and very dense intestinal adhesions were separated with the view of obtaining access to the uterine appendages. But as some of these, especially those involving the fundus and posterior surface of the uterus, were so firm as to be incapable of separation without grave risk of rupturing the bowel, it was

decided not to proceed, but to be content with thoroughly douching the two abscess cavities and inserting a drainage-tube. There was some free bleeding from a large vein, which was secured by a ligature. There being still a good deal of oozing from the site of separated adhesions on the right side, this part of the pelvis was packed with strips of iodoform gauze. The patient was by this time much collapsed. A subcutaneous injection of brandy (80 min.) was therefore administered and the legs elevated. When she had rallied a little the abdominal wound was closed, the dressings applied, and the patient removed to the ward. The pulse improved for a little time, but at 6 P.M. the breathing became difficult and death took place an hour later.

Necropsy, by Dr. HAWKINS, *2 p.m. Friday, Feb. 16th, nineteen hours after death.*—On opening the abdominal wound the abscess cavity beneath the abdominal wall was displayed, and was found to measure four inches in diameter; its walls were formed by thickened omentum. The left Fallopian tube—much inflamed, thickened, and dilated—lay immediately beneath the anterior abdominal wall folded upon itself and with its fimbriated end directed upwards. It communicated with the abscess cavity above described in two places, one perforation being about the size of a No. 8 catheter. On laying the tube open its inner surface was seen to be extensively ulcerated. The left ovary was not found. The right Fallopian tube was also enlarged, œdematous, and thickened by chronic inflammation, and, winding backwards behind the right broad ligament and uterus, opened directly by an aperture three-quarters of an inch in diameter into another large abscess cavity between the rectum and the vagina, formed either within the tube or within the ovary (a point to be again alluded to) and equal in size to the one already described. The inner surface of this cavity was ragged and ulcerated and covered with shreds of a sloughing tissue. Its walls were of varying thickness, being of extreme thinness above, whilst below they were in places more than an inch in thickness, and consisted of a tissue apparently fibrous in character, creaking under the knife, and dense from inflammatory exudation. It was not possible to say with certainty whether this tissue was the outer end of the Fallopian tube itself, dilated and enormously thickened by inflammation, or whether a communication had been established between the tube and the ovary and the thickened tissue was ovarian. The pouch of Douglas expanded in all directions, was entirely filled by the tumour containing the abscess, except at its lowest part, where, between the smooth, rounded external surface of the tumour and the much depressed recto-vaginal reflection of peritoneum, a quantity of serous effusion had taken place. The uterus, vagina, and bladder were healthy. An intensely firm adhesion existed between a coil of intestine and the fundus and posterior surface of the uterus. The intestine was carefully examined with a view to ascertain whether the fæcal odour apparent during the operation was due to a communication between the bowel and one of the abscesses, but no such communication was detected. The mucous membrane of the bowel was healthy throughout. There were some old and recent adhesions between the liver and the diaphragm, but the liver itself was healthy. The kidneys showed a slightly granular condition.

CASE 2.—A widow thirty-two years of age was admitted into St. Thomas's Hospital on Nov. 6th, 1893, on account of severe pain in the left iliac region and marked constitutional disturbance. She had been married fourteen years and had never been pregnant. Her husband, a man of bad moral character, died in February, 1893. She stated that three years ago she had an attack of what her medical attendant called cystitis, accompanied by a profuse vaginal discharge, for which injections of alum were prescribed. She had suffered ever since from a return of the yellow discharge at intervals, the discharge lasting three or four days at a time and being relieved by douching. Her present illness commenced suddenly on Oct. 19th (about three weeks before admission) with pain in the lower part of the abdomen and in the left hip and thigh, sickness, thirst, and loss of appetite. She was so ill as to be compelled to keep her bed. For some weeks previously she had complained of a pain striking down the left thigh as far as the knee, and on the day preceding the acute attack she had felt ill and cold, though there was no distinct rigor. The sickness lasted for a fortnight. During the earlier days of the illness there was a slight yellow vaginal discharge with some pain on micturition. On admission the patient looked ill. The temperature varied from 100·8° to 101·6° F.; the tongue was furred and dry; the breath was offensive; the bowels were very constipated; the urine was of high specific gravity, and contained an abundant deposit of urates with a trace of albumen. The abdomen was somewhat full. There was a marked sense of resistance with some tenderness in the left iliac region. On the right side no resistance was felt, but on deep palpation the tenderness was more marked than on the left. On vaginal examination the cervix uteri was found to be fixed, but otherwise normal. The uterus was displaced forwards. The right side of the pelvis was occupied by a firm immovable mass, fixing the uterus and not causing any depression of the vaginal roof. On the left side there was a softer and more elastic swelling, causing a slight depression of the left lateral fornix, and felt to be continuous with the ill-defined mass situated in the left iliac region. The swellings on the two sides were acutely tender and were connected by an irregular mass filling up and depressing the pouch of Douglas. The diagnosis was double gonorrhœal salpingitis, with pelvic suppuration on the left side, probably intra-peritoneal. Abdominal section was proposed and agreed to. The operation was performed on Nov. 9th. The contents of the pelvis were matted together and covered in by adherent omentum. While the adhesions were being separated an encysted intra-peritoneal abscess, situated behind the uterus and left broad ligament, was opened, and a quantity of thick offensive pus made its escape. The quantity collected and measured was eleven fluid ounces; a good deal was caught up by sponges and could not be measured. The patient's general condition at this stage of the operation became alarming; her pulse was 192, her respiration 66. There still remained a hard, irregular mass on the left side, consisting of broad ligament, left uterine appendages, and adherent intestine all matted together. With the finger of an assistant in the rectum to serve as guide and to protect the rectum itself from injury, an attempt was made to separate the component parts of this mass, but it was found so difficult to differentiate them that the attempt was abandoned. The right appendages were lying in front and to the right and were apparently normal. The abscess cavity was douched with a hot solution of boracic acid. After the douching it was again explored with the fingers. Its walls were formed by the uterus, the left broad ligament with the adherent left uterine appendages, and the posterior pelvic wall, these being lined posteriorly and laterally by adherent loops of intestine and bands of omentum. The vermiform appendix was brought into view and found to be quite healthy. The cavity was once more douched, a glass drainage-tube was inserted, and the incision was closed. The length of the incision was three-quarters of an inch. Next day it was noted that there had been no sickness and very little pain. The pulse, which at the close of the operation was very feeble and could not be counted, was now 132. On Nov. 11th a soft rubber drainage-tube was substituted for the glass one. There was no abdominal obstruction and the patient was able to pass urine naturally. On the fourth day (Nov. 12th) the bowels acted well after a dose of castor oil followed by an enema. On Nov. 16th the stitches were taken out and the drainage-tube was shortened, the quantity of discharge being very slight. The tube was finally removed on Nov. 23rd and a week later the wound had completely healed. After the sixth day the temperature seldom exceeded 100° and the general condition improved rapidly. The patient left the hospital on Dec. 8th looking and feeling very well. She has not reported herself since, as she was requested to do, but she was seen walking along the street five months after the operation looking quite well.

Remarks by Dr. CULLINGWORTH.—These two cases are not placed in chronological order, because the case that occurred first in point of time is likely to be understood more easily if read in the light of the one which followed it, and which for that reason is here placed first. Speaking first, then, of Case 1, it affords a striking illustration of the disastrous effects that are apt to follow an attack of gonorrhœal salpingitis, even when the disease had been apparently cured and the symptoms have been for some years in almost complete abeyance. There is no class of cases in which it is necessary to be more on one's guard in reference to prognosis, for under the influence of rest and soothing treatment the symptoms may abate, the physical signs may become less marked, and the general health may improve, and yet the patient may be far from being cured. When the

acute attack has been attended with suppuration and the pus has not been evacuated either spontaneously or by the surgeon *at the time* the Fallopian tube may become occluded or peritoneal adhesions may be formed around its abdominal ostium, and so the pus may remain walled in for months or even years without causing much inconvenience beyond a special liability to transient attacks of localised peritonitis after any extra exertion or exposure. But all this time an ulcerative process is going on, and the walls of the abscess cavity are becoming thinned in one or more places. Eventually perforation occurs and the long-imprisoned pus finds an outlet either amongst the surrounding tissues or into some adjacent viscus, with results more or less disastrous, and not infrequently fatal. In the present instance the truce extended over a period of no less than seven years. It will be observed that there were two separate abscesses, one fed by the left Fallopian tube and one by the right. The former was situated immediately beneath the abdominal wall and had thickened omentum for its boundary; the latter lay deeply down behind the uterus, and though the communication between it and the tube could be traced without difficulty the precise nature of its enormously thick boundary wall was less easy to determine. When the disease has reached the stage of rupture nothing but surgical interference can usually avail to save life. Only in order to be successful it must be timely. If not resorted to until the vitality of the patient has been seriously lowered by prolonged septic absorption and until matters have become desperate the help may, as in this instance, come too late. There can be little reasonable doubt that this patient's life would have been saved had operative measures been adopted earlier. It is interesting to speculate as to the probable nature of the swelling that in 1885 gave rise to the diagnosis of suppurating ovarian cyst. The gradual disappearance of the swelling renders it most likely that it was a large encysted serous effusion. The purulent salpingitis would be accompanied by inflammation of the surrounding peritoneum, and under such circumstances a serous effusion not infrequently accumulates amongst the adhesions and has been known occasionally to reach a size sufficient closely to simulate a cystic tumour. Notwithstanding the unsuccessful result of operation in this case, I have thought it right to place it on record for the sake of the important lessons to be learnt from it. No better example could be given to show: (1) the insidious nature of the disease; (2) the fallacy of accepting even a long-continued abatement of symptoms as in every instance satisfactory evidence of a permanent cure; and (3) the danger of postponing active surgical interference until a fatal issue is actually impending. The second case was, fortunately, more successful; indeed, it may be regarded as an instance in which (speaking with the reserve necessary in all such statements) life was saved by the operation. Here, too, as in Case 1, the history points unmistakably to gonorrhœa as the starting-point of the mischief. The acute abdominal symptoms had only existed for three weeks; their onset probably indicated the moment when the purulent contents of the left Fallopian tube escaped into the peritoneum. There they were, no doubt, prevented from becoming generally diffused over the peritoneal cavity by being at once caught amongst already existing adhesions due to the localised peritonitis with which a pyosalpinx is invariably surrounded. At the time of the operation the intra-peritoneal abscess thus formed had become a very large one, and the constitutional disturbance had become very serious. I believe it is good practice when dealing with a case of this kind to remove, if possible, the source of the suppuration—namely, the ruptured Fallopian tube. But the intestines were in this instance involved to an unusual extent, and this fact, together with the alarmingly rapid rate of the patient's pulse, made me decide to choose the less of two evils and content myself with thorough evacuation and drainage of the abscess cavity. The extremely satisfactory result fully justified this course, and goes far to show that the tube had in this instance emptied itself of its purulent contents at the time of rupture. If one could always be sure that this complete emptying had taken place it would of course be unnecessary ever to remove the tube or do more than empty and drain the intra-peritoneal abscess. But it is well known that in a large number of cases the tube becomes sacculated, and separate collections of pus are formed, of which only one becomes evacuated when rupture takes place. Hence a solitary instance in which the tube was left behind with impunity is not to be taken as proving that the practice is a safe one or one that ought to be generally adopted.

Reviews and Notices of Books.

A Treatise on Diseases of the Skin. By T. McCALL ANDERSON, M.D. Second Edition. London: C. Griffin and Co. 1894.

THE growing interest in dermatology all over the English-speaking world is well shown by the demand for another edition of this work, by Dr. McCall Anderson, in spite of highly successful and more recent rivals in the same field. The author asks in his preface that his work should be judged from the clinical standpoint only, as it is written entirely with a practical aim. "The whole work," he tells us, "has been thoroughly revised in the light of the more recent investigations; some of the chapters have been entirely rewritten and many new articles have been added." In the preparation of this edition he has called in several coadjutors to his aid. Dr. H. C. Cameron has contributed most of the surgical sections, including sebaceous cyst, anthrax, pustula maligna, dermatitis calorica, nævus, and epithelioma; Dr. W. Macewen most of the article on Ulcers; Dr. George A. Turner writes on Elephantiasis, Lymph Scrotum, Framboesia, and the "Revisal of other Tropical Diseases," which in the first edition were written by the late Dr. James Christy; Dr. Bernard Wolff has translated Unna's article on Eczema Seborrhoicum; Dr. Savill deals with Dermatitis Exfoliativa Epidemica; Dr. Thomas Bryce has abstracted the reports of the cases from the "International Atlas of Rare Skin Diseases," which can thus be very conveniently referred to, while Dr. J. Brown has assisted the author in the proofs and index. It is evident, therefore, that the work is to a considerable extent a coöperative one, though in all the commoner diseases we have the advantage of gleaning from Dr. McCall Anderson's wide experience. Without attempting to fully analyse a book which has proved its *raison d'être*, we will only remark on certain points which strike us. The diseases of the appendages of the skin have an early place in the work. In spite of Unna's article on eczema seborrhoicum in another part, the author still—and wisely, we think—treats seborrhœa sicca as an affection separate from eczema seborrhoicum; but it illustrates the disadvantages of the coöperative plan when we see the opposing views expressed in different parts of the same work. The article on alopecia areata is almost unaltered, the author, whilst bringing forward well authenticated cases of contagion, does not appear to differentiate between the various forms of the affection, but includes all in one category, and holds that the disease is a neurosis. The facts brought forward in proof of this, while conclusive that some forms of alopecia are of neurotic origin, which is not disputed, would not exclude the possibility of a parasitic form nor account for the cases of contagion which he himself quotes.

The description of the clinical aspects of eczema appears to us to be accurate and practical, but in its treatment Dr. Anderson, who is a strong believer in arsenic, does not state to what cases it is best adapted, though he tells us it is contraindicated in cases with digestive disturbance, and in acute cases, in which it aggravates the irritation.

Dr. McCall Anderson describes in this edition the pityriasis rubra pilaris of Devergie, and after stating the divergent views of the Vienna and French dermatologists, sums up the matter, as far as he himself is concerned, by saying, "that if pityriasis rubra pilaris is distinct from Hebra's lichen ruber, then he has never seen the latter affection." Few things in dermatology are more strange than the divergence of opinion on this subject of men like Kaposi, Hebra, jun., and Newmann, since they all had such special opportunities of knowing what Hebra, sen., meant by lichen ruber. We cannot but regret that the author still retains the old term lepra as a form of psoriasis, heading his article "Psoriasis

and Lepra," thus perpetuating the ambiguity from the term being used for the gyrate forms of psoriasis and leprosy. Curiously enough, however, he does not seem to recognise that there are gyrate forms of psoriasis which are so from the first and are not merely patches which have cleared in the centre in their process of involution. In speaking of the treatment of psoriasis by chrysarobin the author says: "In children or on parts, such as the face, where the skin is delicate, it may be wise to begin with an ointment of five grains to one ounce." We must say that it would be much wiser not to use it on the face at all.

Dr. G. A. Turner, who is responsible for the article on Yaws and has studied it in Samoa, is emphatic in his denial that yaws has any relation to syphilis; he also says that it occasionally attacks whites and in them is more intractable. In the article on Madura Foot, although Carter's original observations on the fungus are discussed, his later ones in its relationship to actinomycosis are not mentioned, neither are the observations of Crookshank, Hewlett, Boyce, and Surveyor alluded to.

Although the work is not without shortcomings chiefly in the way of omissions, and from its sometimes lagging a little behind the most modern accepted views, it has many merits. It is written clearly, and Dr. McCall Anderson's observations are always interesting and practical. The work is well got up; it has four recognisable coloured plates of Psoriasis rupioides, Xeroderma pigmentosum, Xanthoma, and Favus of the body, and there are numerous well-executed uncoloured illustrations and woodcuts, mainly selected from a practical point of view.

Practical Photo-Micrography. By ANDREW PRINGLE, F.R.M.S., &c. Illustrated. London: Iliffe and Son.

THIS book is exactly what it pretends to be—a manual for inexperienced workers: brief, explicit, practical, and moderate in price, with only so much of theory "as seems necessary for the intelligent performance of the operations described and recommended." Mr. Andrew Pringle is so well known as an exponent of the arts of photography and photo-micrography that anyone conversant with what has been done in these branches will be prepared to receive anything that he writes as both sound and practical, and certainly in this case the expectation will be fulfilled, as Mr. Pringle in the 160 pages before us has managed to give everything that an elementary student of photo-micrography need master, and much that will be useful even to those who do not enrol themselves in that class—from the fitting up of the dark room to the staining of bacteriological preparations, especially those designed for photographic reproduction. A concise but full description is given of what a photo-micrographer will find necessary for his work—the microscope and its parts; the micro-photographic apparatus, horizontal and vertical; objectives and oculars, and, perhaps most important of all, the condenser, its fittings and its use. As to the methods of illumination, the author prefers the limelight or the ordinary paraffin lamp light when, as in this country, good sunlight is not to be obtained. The centering, lighting, and focusing of the condenser and the use of the paralleliser are briefly but accurately described, leaving just enough to the imagination to make the operator use his brains. The latter part of the book is taken up with the exposure, development, and further treatment of plates good and bad, printing on gelatino-chloride and bromide papers, enlargement, and the preparation of lantern slides. To our mind Mr. Pringle has placed his finger on the main difficulty in the photo-micrography of bacteria and histological preparations; in nine cases out of ten the special tissues are not sufficiently differentiated in the staining processes, and his two italicised words, "maximum decolourisation" of every tissue that is not to be coloured by the special stain used, embody the most pointed and accurate direction that we have yet come across. The whole of the directions given for the preparation of tissues are, however, exceedingly good, and may be of use even to those who do not intend to engage in photo-micrography. Altogether we can strongly recommend this little work to the tyro in photo-micrography, to whom it will serve as a handbook even when he has passed the elementary stage of his work. It is well printed and the illustrations are admirable.

St. Bartholomew's Hospital Reports. Vol. XXIX. Edited by W. S. CHURCH, M.D., and W. J. WALSHAM, F.R.C.S. London: Smith, Elder, and Co. 1893.

THIS yearly volume is divided into two parts, the first of which comprises various contributions of interest, chiefly from the pens of members of the staff or old students, and the second the statistical reports of the hospital. Mr. Harrison Cripps contributes an illustrated account of the new operating theatre and its fittings, attached to the Gynæcological Ward; also a somewhat lengthy account of the routine method employed by him in abdominal section. To this are attached notes of the cases submitted to operation. Dr. Champneys writes on the removal of the uterine appendages (the substance of two clinical lectures). A paper is given by Dr. W. P. Herringham on Chronic Peritonitis, with especial reference to that form which is caused by tubercle, and a discussion on its treatment. The following are also contributors: Mr. W. Morrant Baker, a brief note on the Relief of Pain in Certain Cases of Cancer of the Tongue; Mr. Butlin, A Year's Surgery at St. Bartholomew's Hospital (cases in his own wards); Dr. T. Claye Shaw, on the Early Stages of Acute Insanity; Dr. V. D. Harris and Mr. G. A. Grace-Calvert, the Human Pancreatic Ferments in Disease; Mr. Alfred G. Francis, two cases of Lymph Angioma of the Tongue, with some remarks on Macroglossia; Dr. Archibald E. Garrod, on an Unusual Form of Nodule upon the Joints of the Fingers; Mr. W. Gifford Nash, Torsion of Spermatic Cord causing Strangulation of the Testis and Epididymis; Mr. Arthur Maude, Some Rare Clinical Points in Graves' Disease; Mr. E. W. G. Masterman, Rodent Ulcer; Dr. J. A. Ormerod, a case of Postero-lateral Sclerosis; Dr. H. H. Tooth, Destructive Lesion of the Fifth Nerve Trunk, an Anatomical Study; Mr. W. McAdam Eccles, Temperature in Relation to Injuries of the Head; Mr. Charles A. Parker, Nasal Breathing in Nasal Obstruction; Dr. F. Parkes Weber and Mr. J. A. Arkwright, Pseudo-bulbar Paralysis following a Lesion of the Right Side of the Brain, pointing to the Probable Existence of defect of the Left Side, previously latent; Dr. Norman Moore, Locomotor Ataxy and Partial Paraplegia in Children; Mr. H. J. Waring, Acute Infective Osteoperiostitis; Dr. Edmund Cautley, Irregularity of the Heart; Mr. Bullar, Uncommon Ophthalmic Cases; Dr. H. Lewis Jones, Symmetrical Atrophy Affecting the Hands in Young People; Dr. West, three cases of Dermatitis Herpetiformis, with some instances of Local Bullous Eruption following Poisoned Wounds, and remarks; Dr. James Calvert, a case of Tracheal Obstruction causing Expiratory Dyspnœa and Emphysema; Dr. H. Morley Fletcher, a case of Pseudo-hypertrophic Paralysis in an Adult; Sir Dyce Duckworth, notes on Taches Bleuâtres; Dr. W. S. Church, two cases of Hydatid Disease; Mr. W. J. Walsham, two cases of Mastoid Suppuration following Middle Ear Disease.

We have not space to criticise these various contributions, which are nearly all of them excellent in their way. The statistical reports of the medical department, by Dr. Ormerod, and the surgical, by Mr. James Berry, are disappointing in their brevity. We learn that 6046 patients were under treatment during

the year 1892 and that 600 died, and although there are appendices to the statistical tables we do not get much of value from them. The tables are not compiled as if their purpose was to give information to the profession. Again, they do not quite correspond. We learn, for instance, in the medical report that six patients, the subjects of ovarian tumour, died during the year and that four of these were subjected to operation. In Table II. of the surgical report three cases are said to have died, whilst in Mr. Harrison Cripps' report of the special department he only mentions two deaths as the result of operation. Thirty-seven operations were performed for strangulated hernia, with fifteen deaths; in most of these death resulted in consequence of the long delay before admission. Two cases of inguinal hernia died without operation, but no explanation of this is given. A fatal result followed the radical cure for femoral hernia in one case out of five, and for inguinal hernia in two out of twenty-two. Only twelve cases of erysipelas arose in the wards, but six cases of pyæmia are noted as having developed. Diseases of women are included in the medical report, and diseases of the eye in the surgical part. Mr. Edgar Willett gives a list of the specimens added to the hospital museum during the year ending September, 1893.

Paludism. By Dr. A. LAVERAN, Professor of Medicine in the School of Val de Grâce. Translated by J. W. MARTIN, M.D., F.R.C.P. Edin. London: The New Sydenham Society. 1893.

THE discovery made in 1880 by Dr. Laveran of hæmatozoal parasites in malarial fevers has received such abundant confirmation from all quarters of the globe that it is impossible to over-rate its value and importance. The readiness with which the parasite can be recognised, the characteristic forms in which it appears, the relationship between its presence and the febrile paroxysm, and the marked effect produced on it by antiperiodic treatment are facts which point strongly to the etiological connexion between it and the disease, whilst they serve as most valuable aids in diagnosis of the febrile attack. This parasite—the plasmodium malariæ—is met with in the blood, partly as free bodies, partly attached to the red corpuscles, at the expense of which it lives. It thus soon becomes filled with granules of pigment, which, whilst the parasite is yet alive, exhibit peculiar motility, and the presence of which still further facilitates the recognition of the organism. It assumes various forms, probably stages in its development, from small, highly refractile spherical bodies, one or more of which may become implanted on a single corpuscle, to large pigmented spheroids larger than blood corpuscles, or oval-shaped bodies, or bodies of a marked crescentic form, or rosetted, or flagellated. Dr. Laveran has pointed out that in many lower animals there are hæmatozoa of similar type; but the reproduction of the phenomena of malarial fever has not, we believe, been observed to follow on inoculation experiments. In spite of this the explanation which the nature and habits of the parasite gives of the pathological characters of malaria—the anæmia, splenic tumour, pigmentation of organs &c.—is satisfactory and far-reaching; whilst the association of the paroxysm with the increase in number of the parasites harmonises with the spirillar invasion in an attack of relapsing fever.

Although intermittent fever has been almost banished from this country, where it was once indigenous, the wide-reaching extent of the British Empire brings under the ken of her medical members a host of fevers of this class and affords opportunities for their study. Dr. Vandyke Carter in India has confirmed Dr. Laveran's work, and others in other colonies have arrived at similar results. The New Sydenham Society has therefore done well in issuing a translation of the monograph by Dr. Laveran, in which the whole subject is treated with remarkable lucidity and scientific precision.

New Inventions.

THE THERMOGEN.

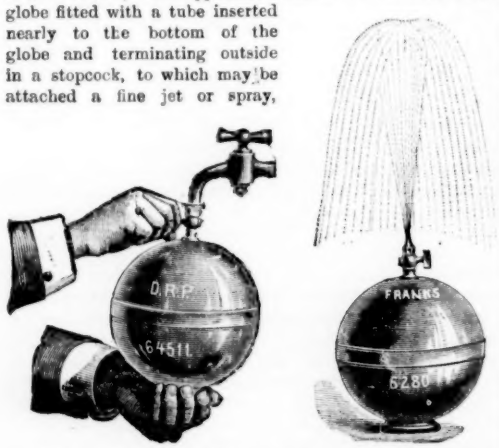
IN writing of the last Royal Society conversazione, held on Wednesday, July 13th, we mentioned as an exhibit of particular interest to the medical man an invention by Mr. C. T. Snedekor for heating by electricity a quilt or cushion. It was obvious that such a quilt could be used in private or in hospital for many therapeutic purposes. This quilt, which he named the thermogen, we have since had an opportunity of putting to practical trial under more lengthened observation, and have no hesitation in reporting upon it thoroughly favourably as an appliance that might be of great value in all hospitals, or, for that matter, in all private houses where an electric main is handy. The quilt contains a coil of wire consisting of a special alloy of known composition and electrical resistance, and bent in the fashion of a gridiron. The coil is enclosed in suitable insulating and non-conducting material, the whole being embedded in cotton-wool or other soft substance provided with a silk or woollen covering. The resistance offered by the coil to the flow of the current—the friction set up, so to speak, by the passage of the current through the wire—produces the heat, in accordance with the laws of Ohm and Joule, in the same way that heat, and eventually light, are produced in the filament of the electric glow lamp when a current is forced through it. The coil contained in the quilt which we examined is constructed to admit of connecting with the terminals of an ordinary installation supply of 100 volts pressure, which effects a uniform temperature in the quilt of about 150° F. In the event, however, of the temperature rising beyond that point, which would be the case if there were an increase of pressure in the electric mains, a safeguard is provided in the end of the coil in the form of a "fuse," which would instantly melt and so automatically shut off the current. The quilt may be readily attached to wall plugs, pendants, or still more conveniently to table lamp terminals. In places where the electric current is not supplied for lighting purposes an accumulator may be substituted with equally satisfactory results.

The direction in which such an invention might be medically useful is first, and we think in chief, on the operating table. In lengthened operations or in those necessarily attended with much hæmorrhage, where artificial means to sustain the patient's temperature are required, most surgeons can recollect cases when the blankets and hot water at present in vogue have proved a decided nuisance. In such cases this quilt would be found literally invaluable as a soft, dry, warm, and convenient covering. Again, in cases of chronic rheumatism or of that undefined neuralgia generally called lumbago the quilt might prove comforting. Also, in cases of senile slowness of circulation attended with general chilliness such an appliance would be very useful. We understand that the thermogen is receiving trial at several of our largest hospitals, and our own experience leads us to believe that it will prove to be a valuable adjunct to the hospital paraphernalia.

APPARATUS FOR THE UTILISATION OF THE WATER PRESSURE OF THE MAIN AND ITS APPLICATION.

THIS ingenious application of a well-known principle has already been briefly described in our columns, but

improvements of an interesting character have recently been added, which make the apparatus worthy of a fuller notice. The apparatus consists of a large metal globe fitted with a tube inserted nearly to the bottom of the globe and terminating outside in a stopcock, to which may be attached a fine jet or spray,

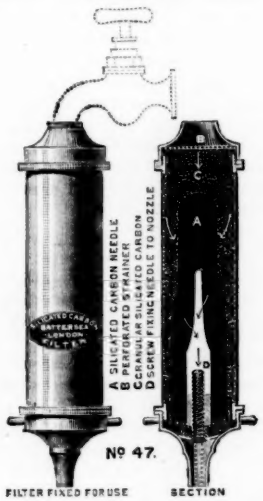


according to requirements, some of which are indicated in the accompanying illustrations. In order to start the apparatus it is only necessary to apply the tap of the reservoir to the tap of the main for a few minutes, leaking being provided against by means of a rubber plate or washer attached to a connecting piece which fits the same screw which serves to hold the jets. When the apparatus is thus connected and both taps turned on, water at the pressure of the main supply enters the globe and compresses the air in its upper part until equilibrium is established. At this point the taps are turned off and the reservoir detached. There is then water in the globe acted upon by a column of air at the pressure of

the main. By attaching a fine jet and turning on the tap a column of water will be ejected at a surprising height, and will last for several hours. Varying forms of nozzles may be used, such as for the production of spray or a small shower bath. When the apparatus ceases to act the stock of water and the pressure may readily be replenished. It forms a pleasant adornment for the table and could be used with advantage in the sick-room. By mixing a little oil of eucalyptus with the water in the reservoir a pleasantly scented as well as an antiseptic spray can be obtained. The apparatus may be, in fact, in this way effectively used as a purifier and deodorant of the atmosphere, and so become a valuable adjunct to the sick-room. It is the invention of Mr. C. Frank of 25, Aldermanbury, E.C.

SILICATED CARBON PRESSURE NEEDLE FILTER.

THE construction of this neat and compact filter will be readily understood from the adjoining illustration, in which it is shown both in section and also in position when fixed for use. The direction taken by the water to be filtered is represented by the arrows. Thus, after passing through a strainer (B) it comes into contact with loosely packed silicated carbon fibre (C), which effectually removes impurities of a more or less coarse kind, keeping the surface of the filtering needle (A) clean and so serving to maintain its initial filtering speed. Then by its own pressure the water is gently forced through the silicated carbon needle (A) and eventually finds an outlet through D. The needle consists of a dense,



thick-walled cylinder constructed of silicated carbon resembling an iron pestle in shape. In action it is not tediously slow and yet not so fast as to escape the purifying effects of the material. According to the few trials we have made it possesses excellent filtering powers, while it presents certain features which we consider are essential in really serviceable filters. Apart from the convenience and advantage, for instance, of attaching it to the supply tap, it admits of cleansing even by boiling when required; while undue clogging of the important filtering section may be easily avoided and the loose fibre outside may be readily replaced. Moreover, the purifying powers of the medium (silicated carbon) used in this filter have been established even to the extent of removing organisms. The device appeals to us as being in accordance with the requirements of modern investigation. The filter is the invention of the Silicated Carbon Company, of Church-road, Battersea, S.W.

UNIVERSITY OF ABERDEEN.—At a meeting of the University Court of the University of Aberdeen, held on July 10th, the following gentlemen were appointed extra-professorial Examiners for Degrees for one year, commencing Oct. 1st ensuing, viz:—Botany: R. J. Harvey Gibson, M.A., University College, Liverpool. Zoology: J. A. Thomson, M.A., School of Medicine, Edinburgh. Chemistry: John Hunter, F.I.C. &c., School of Medicine, Edinburgh. Anatomy: Thomas Wardrop Griffith, M.D., Yorkshire College, Leeds. Physiology: W. H. Thompson, F.R.C.S., Queen's College, Belfast. Materia Medica: Francis Warner, M.D., London. Medical Jurisprudence and Public Health: Francis J. Allan, M.D., London. Pathology: James Lorrain Smith, M.A., M.D., Cambridge. Medicine: Sidney Coupland, M.D., London. Surgery: John C. Ogilvie Will, M.D., Aberdeen, Midwifery: George M. Edmond, M.A., M.D., Aberdeen.

THE LANCET.

LONDON: SATURDAY, JULY 21, 1894.

THE General Medical Council is dependent for much of the consistency and continuity of its action, and through these for its fair reputation, on its Executive Committee. It devolves at every meeting very important questions for consideration and report by the committee. It did so at the May meeting. It is understood that the Executive Committee will meet at the end of the present month. The moment is not inopportune for reverting to one or two subjects of some moment which have been referred to it. The Executive Committee was asked to obtain legal advice as to what means could be adopted by the Council to stop the practice of persons continuing to use titles attaching to diplomas of which they had been deprived and which no longer appear on the Registers for which the Council is responsible. Our readers must have been struck with the illustrations of this state of things—the boldest publication in newspapers and books of titles which have been withdrawn by the bodies which gave them and which have been erased by order of the Council. It is surely somebody's duty to see that titles which are no longer valid and true should cease to be used. It may be the duty of the body which originally gave the diploma, or of the General Medical Council which, after due inquiry, has ordered the name and titles to be erased; more than all, perhaps, we should have thought it the duty of the Public Prosecutor to see that so great a misrepresentation is not permitted. But these are questions on which the Executive Committee is to obtain legal advice.

A still larger duty was imposed on the Executive Committee—viz., that of reporting to a future meeting of the Council on the amendment of the Medical Acts. This subject came before the Council in the shape of a report, communicated from the Parliamentary Bills Committee of the British Medical Association, on the amendment of the Penal Clauses of the Medical Act. This is a large subject, and one requiring the greatest amount of care and discretion in its handling. The House of Commons is not fond of medical legislation. There is little in it which appeals to party feeling or bears seriously on the issue of elections; and when the legislature has once passed a great Act like that of 1858 or 1886 it likes to rest for a quarter of a century. Still, there are defects and faults in the Medical Acts which will need attention and remedy at an opportune moment, and which are very moderately and reasonably dealt with in the report of the Parliamentary Committee. There are, for example, in the fortieth clause loopholes which permit the escape of many who delude the public and the poor. Without wilfully and falsely pretending to be registered, or using the title of physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner, or apothecary, it is possible to invest a house and the man who lives in it with a medical character which deceives the public. One of our defence unions has been at a great expense to expose the sham of a band of Hindoos who appropriated the title "oculist" and who traded on it to the cost and damage of the ignorant. The title is not among those prohibited by the Act, and the prosecution on a charge of conspiracy to defraud and obtain money by false pretences failed. But the jury did not fail in their duty of protesting against the imperfect state of the law. They added a rider to the verdict of not guilty, "deeply regretting that at present there existed no law which would prevent persons so grossly ignorant as the prisoners practising surgery." The Executive Committee should take this and similar opinions of juries into their consideration, as showing that the public are not unprepared for amendments in the Medical Act which will deal with all the principal deceivers of the poor and the uneducated. In the amended clauses proposed by the Parliamentary Committee, and which are to be considered by the Executive Committee,[1] the words "oculist" and "aurist" are included, as well as the "use of any title, style, addition, or description directly or indirectly implying" registration, or special qualification to practise medicine or surgery or any branch thereof. This is very well as far as it goes. But, given a good occasion for introducing an amended Act, there are several other amendments that are much required, and which need not now be detailed. We are not sanguine enough to expect any legislation to be able to put down all irregular forms of practice. But we think that it should be clearly laid down that all persons practising for gain, whose names are not on the Medical Register, are acting irregularly and exposing themselves to fine. Is there any reason why the principle of the Apothecaries Act, under which so much of the best defence work is done, should not be incorporated in the Medical Act? We say defence work not in the sense of protecting the profession so much as protecting the poor. As Justice CRESSWELL said, "the Apothecaries Act was intended to have a beneficial effect on the interests of the poorer classes." The principle of it should be transferred to the Medical Act, providing that anyone improperly acting or practising as a medical or surgical practitioner shall be liable to forfeit and pay the sum of £20. This is merely substituting the words "medical or surgical practitioner" for the word "apothecary," and it is not easy to see how it could be objected to. No doubt judgment would have to be exercised in the application of the principle and in the selection of cases, but public opinion would sanction the application in all but trifling cases.

THE total sum which has been received at the Mansion House indicates clearly that the Hospital Sunday Fund continues to progress satisfactorily. The increase, as compared with last year, is gratifying, for seldom a year passes without adverse influences being at work to prevent a steady and regular increase; and the present year has been no exception, so that the success may be looked upon as very remarkable. Last year the total sum collected amounted to a little more than £39,290. The latest returns received at THE LANCET Office bring the

[1] See THE LANCET, May 26th, 1894.

record up to the sum of £42,000, being a highly satisfactory increase even now of nearly £2800 over last year's receipts. The contrast will not be complete until Oct. 31st, but already the Council may safely congratulate themselves on the very tangible results of the special effort which has this year been made by all and sundry having the interest of this Fund at heart. It is an increase which strikes those who have year by year noted the ratio which the Fund bears to general prosperity. Many causes, some of a financial nature, others of a different type, in many parts of the world, have conspired to cause a general reduction of income among the charitable. There has been but a small surplus to devote to the requirements of charity; still, the sums sent to the treasury of the Fund have increased.

We take this opportunity of referring to a custom which of late years has come into existence, and which is calculated to confuse the minds of those not quite familiar with the intention or organisation of the Hospital Sunday Fund. Ministers receive letters on the eve of the offertory advocating the claims of special hospitals which have been refused the assistance of this Fund. These letters speciously suppress any allusion to the reasons which the Council of the Fund deem sufficient for the withholding of an award. The reasons are various, and need not here be further discussed; the main ones are either bad management of the institution, or its possession of a pecuniary status or working plan placing it clearly without the pale of the working of the Fund. Many other causes, which we need not here specify, influence the Council. Another very regrettable practice has also sprung up recently, and it is one rather difficult to deal with. Taking advantage of the generosity of the public, on the approach of Hospital Sunday, boxes are handed about the street for the purpose of soliciting subscriptions from the passers-by for particular institutions. This objectionable proceeding, we need scarcely say, is in no way part of the organisation of the Hospital Sunday scheme, and we sincerely trust to see it brought in some way to a speedy termination.

In all transactions of life special effort is essential before special success can be ensured. The figures which we have noted week by week in these columns give clear proof of this and of the ancient saw that "industry brings with it its own reward." The highest amount received by the committee was the sum of £1202 forwarded by Canon FLEMING, as against £1219 the previous year. We are in a position to know that this sum was not obtained without effort. Canon FLEMING and many other earnest ministers write thousands of autograph letters to the members of their congregations, especially to those who are likely to be out of town on Hospital Sunday. Canon FLEMING'S figures make the effect of this work very obvious. The Fund has yearly to deplore an immense deficiency which is due to the absence from London of the wealthy classes on Hospital Sunday. So far as we know very few of the absentees subsequently send to their ministers or to the Mansion House the amount which they certainly would have placed in the offertory plate had they been present. The one thing most noticeable in studying the returns this year is the fact that wherever in any district any energy has been displayed on behalf of this charity it has received recognition in a corresponding increase of subscriptions sent to the coffers of the Fund. This is apparent not only in impoverished and penurious districts but among congregations in the wealthier districts of this vast metropolis. The chief amounts collected may give an indication of this. Thus from St. Michael's, Chester-square, the Rev. C. J. RIDGEWAY has forwarded this year £1059. Last year the sum reached £979. The offering from St. Jude's, South Kensington, received through the Rev. Prebendary E. EARDLEY WILMOT, amounted to £770. The amount collected in the London synagogues and forwarded by the Chief Rabbi was £83 21*s.* 3*d.* From the Congregational body the highest sum received was £121, as against £111 last year from Blackheath. From Mr. Spurgeon's Tabernacle £132 was added to the Fund.

While we have pleaded for a special effort on behalf of the Fund with all who had its interests to advocate, it will be in the minds of most that we have in no sense spared ourselves; and as the result has been thus satisfactory we trust that we may fairly consider the circulation of one hundred and twenty thousand copies of our Special Hospital Supplement to have been not without effect in accomplishing it. We have spared no efforts in endeavouring—to use a proverbial phrase—to beat the record. From whatever source helping hints could be obtained they were eagerly sought after. The Fund owes a great deal to the zeal of the Lord Bishop of LONDON, who, in accordance with our desire expressed at a personal interview with his lordship, rendered the Fund noble assistance. The letter which he addressed to us must have been effective, for 3000 copies of it were sent from our offices to the members of the wealthy classes, while it was reproduced throughout the length and breadth of the land by quotation in the public press. The Lord Mayor's usual circular letter referred to Dr. TEMPLE'S letter as a special feature in this year's work, and the London pulpits transmitted its message to thousands of willing hearers. The result is satisfactory to us. Our desire is to see the Fund growing yearly in usefulness, and to aid, so far as in our power lies, in assisting to bring this about. The Special Hospital Supplements which now for nine years we have issued have, we trust, favourably affected the Fund. It is for this reason that we desired to have them placed on the seats in preference to their being distributed at the entrance to places of worship; by this means the congregations have the facts before them while listening to the appeals. The distribution of the Supplement in the churches on the Sunday before the offertory is taken has, we have good reason to believe, added to the receipts; but, above all, it has tended to disseminate a knowledge of the wants of the sick poor of this great metropolis and to spread among mankind a desire to help their suffering brothers.

ALTHOUGH the proceedings at the meeting of Fellows of the Royal College of Surgeons of England were not of a very animated or exciting description they were not destitute either of interest or of importance in relation to future progress. Mr. BENNETT'S motion, "That this meeting of Fellows of the Royal College of Surgeons of England desires to congratulate the Council on the proposed alteration

of the by-law relating to the election and admission of members of the Council" was unanimously passed, although Mr. BENNETT characterised the change as one of the most radical concessions to the Fellows which the Council has yet made—a concession, in his opinion the more noteworthy because he believed it had emanated spontaneously from the Council. This reading of collegiate history was challenged by Mr. HOLMES. It may, we think, be reasonably doubted whether the change would have been so readily and quietly made had it not been for the infusion into the Council of the College of Fellows who are in agreement with the views so long advocated by THE LANCET, and for the fact that the change in the by-law was desired by the officials at the College as simplifying the business of the election. These circumstances, combined with the entire cessation of the opposition to the alteration of the by-law which its authors had at first maintained, ensured the adoption of the proposal by the Council when recently renewed within the Council itself. To purely spontaneous action the Council can lay stronger claim in regard to the proposed application for increased powers to enable it to deal more effectually with cases of misconduct on the part of Fellows and Members, and Mr. TREVES' motion cordially approving of the steps intended to be taken for this purpose was fully deserved by the Council. How greatly the Council has hitherto been hampered by the narrowness of the existing by-law the experience of recent years has fully demonstrated; at the same time, those who have been in the habit of watching the proceedings of the Council must have observed that the Council has recently exhibited more determination in dealing with flagrant cases of professional advertising and imposture. It has even ventured to set aside a doubtful legal opinion and to take a common-sense view in a notorious case, and has not been deterred from doing its duty to the public and to the profession by the fear of being involved in legal proceedings. In this respect the Council has deserved well both of the Fellows and the Members and the profession at large. Recognition of the merits of the Council in regard to the proposed amendments in defective by-laws doubtless disposed the Fellows to take a favourable view of the action of the Council in other respects, and the proposal to institute a dinner alternating with the Hunterian festival to enable the Council to pay the social debts incurred through the courtesies shown to the President of the College by entertaining distinguished guests, and thereby "maintaining," as it is described, "the position of the College among other great institutions," received the sanction of the meeting without any adverse comment.

Next came Mr. H. W. PAGE'S motion regarding the mode of the election of the President, which was reported in THE LANCET of last week. We agree with him in thinking that the Council should endeavour to find out the general wish of the Fellows on this subject and act upon the result, whatever it may be. A controversial spirit was raised during the debate which followed, and the votes of those present were given as if the actual question to be determined was whether the President should be elected by the Council or by the Fellows. The result of the division was to show a considerable majority in favour of the resolution and, so far, to give support to Mr. PAGE'S opinion that "there is a feeling of discontent with the present mode of election." This conception of the scope of resolutions did not terminate with Mr. PAGE'S motion. A resolution was proposed by Mr. VICTOR HORSLEY and seconded by Mr. A. T. NORTON desiring that the concessions made to the Fellows should be embodied in a new Charter. It appears to us that a new Charter is necessary to place the Fellows and the Members in their proper position in the College, to give authority to meetings at present purely informal, and to enable the Fellows to appoint a committee or committees. No one has spoken more strongly in favour of a committee of Fellows similar to the annual committee of the University of London than Mr. HOWSE, and it is with some surprise that we find him arguing that no additional powers are needed to enable the Fellows to elect an annual committee. As Mr. RIVINGTON pointed out, the annual committee of the University of London is elected in accordance with a special provision in the Charter of the University, and it is obvious that no informal committee elected by an informal meeting—a meeting not authorised expressly by Charter—could possibly have the weight either with the Fellows or with the Council which an authorised committee of an authorised meeting would have.

The feeling in the meeting was strongly in favour of adopting a resolution affirming the desirability of nominating a joint committee of the Council and the Fellows to report to the Council on the changes deemed advisable. Mr. VICTOR HORSLEY, Mr. PAGE, and Mr. HOLMES all spoke in favour of this course, but the President ruled that a clause of this kind introduced entirely new matter and must come under the regulation requiring twenty-one days' notice of motion. In consequence of this ruling an amendment moved by Mr. GOLDING-BIRD and seconded by Mr. BENNETT, "that it is premature to consider the question of a new Charter until the changes required have been resolved upon," was carried by the meeting. On the face of it this amendment does not look as if it was intended to be friendly to the acquisition by the Fellows of a new Charter to establish their privileges and convert them into rights, but Mr. HOLMES, who is generally an acute critic, accepted it in the favourable sense, and declared that it really did not matter whether the meeting passed the amendment or the original motion, as they both meant the same thing. This declaration seemed to have a considerable influence upon the decision of the meeting.

One very satisfactory feature of the meeting was the *rapprochement* between the Association of Fellows and the Society of Fellows. But for the ruling of the President, which is, doubtless, technically correct, the members of both Associations would have united in appointing representatives on a joint consultative committee and the whole of the pending questions relating to the Fellows and the Council would soon have been brought to a final solution. As it is, these questions will have to be postponed till next year—at the earliest until the January meeting of the Fellows. This interval will be turned to good account if the executive committee of the two societies will use it to arrive at an understanding and will take common action for the purpose of ensuring the appointment of this joint

consultative committee of the Council and the Fellows. The time is ripe for a settlement of all controversial questions, and all who have the good of the College at heart ought to set aside minor considerations and unite to make this great institution truly representative of professional opinion.

WITHIN the last few days there has been published an important contribution to our knowledge of diphtheria, its prevalence and special incidence on certain periods of life, in the shape of a memorandum by the medical officer of health of the London County Council on the increase of diphtheria in London. As this document has been issued almost simultaneously with the appearance of Dr. SYKES'S report on the same subject to the vestry of St. Pancras, which report we noticed at length in our last issue, we gladly revert to the matter now, and the more so as the memorandum of the County Council's medical officer deals with the subject from a point of view which in many respects differs materially from that taken in the report to the St. Pancras vestry.

It goes almost without saying that, from the unique position he occupies, the writer of the memorandum before us enjoys greater opportunities for dealing exhaustively with the subject of diphtheria incidence in London than does any other member of the medical profession; whilst his well-known ability and his long experience of the behaviour of epidemic diseases in the metropolis warrant us in looking to the President of the Epidemiological Society for a soundly reasoned and helpful essay on the subject in question. On carefully reading Mr. SHIRLEY MURPHY'S memorandum, we notice that its scope is, doubtless intentionally, limited by the word "preliminary," which appears on the title page. The report appears to have been presented with the object of instructing the Council on certain points in the behaviour of diphtheria, which are indicated by a study of the statistics now available; thus preparing their minds for the profitable consideration of a further report on the subject based on more complete experience at a later date. The memorandum contains four coloured diagrams and about a dozen tables, so arranged as to illustrate clearly and graphically the arguments advanced in the text. There are those, of course, who will find fault with this document because it does not even pretend to settle, for once and all, the etiological question suggested by its title. But those of us who can realise how much has often been lost to scientific medicine by ill-advised and rash generalisations from insufficient data, will be grateful to Mr. SHIRLEY MURPHY for his patient and judicious handling of the not too eloquent facts at his disposal.

The statistics of the General Register Office contain no separate mention of diphtheria until the year 1855, the deaths due to this cause having, previously to that date, been included under the head of scarlet fever. In the London tables the deaths from these two diseases were not separated until 1859, in which year diphtheria showed excessive prevalence in the metropolis. During the twenty-one years ending with 1883 the London mortality from diphtheria was below the average, but since that date it has been almost constantly above, and this was especially the case in the years 1892 and 1893, when the mortality from this disease was again inordinately high. Although the memorandum before us is primarily concerned with diphtheria incidence in London, nevertheless the geographical distribution of the disease in other parts of the kingdom has been considered. Adopting Dr. LONGSTAFF'S grouping of the districts of England and Wales into "sparsely, medium, and densely inhabited districts," Mr. SHIRLEY MURPHY emphasises the well-known tendency of the disease in recent years to increase in the densely inhabited districts, and to decrease in the areas more sparsely populated. Figures are given in the tables which conclusively prove this; but it is when he comes to consider the distribution of diphtheria mortality in connexion with the ages of the decedents that the cogency of the writer's reasoning becomes more especially apparent. At the cost of no inconsiderable trouble a series of tables has been prepared for the memorandum, showing (*a*) for the whole of England and Wales; (*b*) for London; and (*c*) and (*d*) for "urban" and "rural" England respectively, the difference in the incidence of fatal diphtheria at the several ages and for each of the more recent decennial periods. From these data, which have been most minutely analysed in the memorandum, Mr. SHIRLEY MURPHY deduces the following conclusions:—

1. There has been throughout England and Wales, relatively to the diphtheria mortality at all ages, a considerably augmented incidence of the disease upon the population aged above three and under ten years, in the decennium 1871–80, compared with that in the decennium immediately preceding. And in the case of England and Wales, as a whole, that increase has been maintained throughout the succeeding decennium 1881–90.

2. When croup and diphtheria are taken together (a practice generally adopted by the Medical Department of the Local Government Board in their inquiries) it is found that, in both the periods 1871–80 and 1881–90, there was a relative increase of the disease at school ages (three to ten) as compared with 1861–70.

3. In groups of population where, antecedent to 1871–80 the diphtheria death-rate had been rising, the rate at school ages, though generally rising also, rose in less degree than the rate at all ages, and when the all-age rate was falling the ratio at school age fell in even greater degree than the all-age rate.

4. In 1871–80, with a generally declining diphtheria mortality at all ages, there occurred in each group of the population, at ages three to ten years, a relatively higher diphtheria rate than before; that is to say, the diphtheria mortality at ages three to ten years did not fall in 1871–80 in anything like the same proportion as did the mortality from this disease at all ages.

Commenting on (3) and (4) Mr. SHIRLEY MURPHY remarks that this "new departure" is most noticeable in London, and least so in the rural groups. This fact is suggestive either of the unequal operation of some new condition upon this age period (from three to ten years) in these different communities, or of the notion that such new condition had been in 1861–70 already *more* strongly in operation in the rural districts, *less* strongly in the extra metropolitan urban districts, and *least*

strongly of all in London; it further suggests that the influence of this new condition in 1871–80 on the two last-mentioned groups, and especially on London, prevented the school children of these communities from sharing in the fall experienced by the rural population. Thus we come to the all-important judgment at which the county council medical officer has provisionally arrived, and in which we imagine he will be supported by many of his colleagues who have studied the question independently, and as affecting other populations—namely, that it is to the influence of school attendance that we must look for the main cause of the increase in diphtheria mortality both in London and in other urban communities in recent years, and in fact ever since the effect of the influence of the Education Act began to be felt throughout the country. The Education Act came into operation in 1870, and although comparatively little actual progress was made under it until two years later, nevertheless, there is no doubt that the mere appearance of so powerful a compulsory measure in the statute book had a powerful immediate effect on the managers of voluntary schools in the direction of securing their increased efficiency. At any rate, it is certain that from the year 1870 onwards, children have been aggregated in an increasing degree year after year in schools, under conditions in which opportunity for the communication of infectious disease from one to another necessarily occurs. Table VI., which relates exclusively to London, proves conclusively that a notable increase in diphtheria mortality has been observed to affect children aged from three to ten years, and that this increase has been maintained more or less completely ever since the year 1871, the increase having been much accentuated in recent years. We have no remaining space to further continue our notice of this useful and instructive preliminary memorandum. Mr. SHIRLEY MURPHY, however, concludes with a word of judicious advice to the County Council, urging them "to endeavour to ascertain, if possible, the extent to which schools are contributing to diphtheria dissemination in London, especially those in which infants and young children are taught." The Council will, no doubt, decide to leave the matter in the hands of their medical officer of health for further investigation, and will strengthen his hands for the work by affording him all needful assistance and sympathy; and we doubt not that, in due time, Mr. SHIRLEY MURPHY will be prepared to complete his advice to the Council as the result of his further study of a sanitarily interesting and, from the educational point of view, vitally important subject.

Annotations.

"Ne quid nimis."

THE CONGRESS OF THE BRITISH INSTITUTE OF PUBLIC HEALTH.

DURING the forthcoming week delegates from all parts of the kingdom will be gathering in the great metropolis to attend the congress which has been organised by the British Institute of Public Health, and to which they were specially invited by the Lord Mayor. The programme which has been issued shows that the arrangements are practically complete and everything indicates that the congress will be a success. A reception at King's College on Wednesday evening will precede the actual business, which will commence on Thursday morning in the Guildhall, when Dr. W. R. Smith, the President, will deliver his opening address. In the afternoon the various sections will meet in the Lecture Rooms at King's College, the whole of which building has been placed at the disposal of the congress. Sir Peter Eade, M.D., F.R.C.P., will preside over the Preventive Medicine Section and Sir Charles A. Cameron over that of Chemistry and Climatology. The new Section devoted to the discussion of Municipal and Parliamentary Matters will be presided over by Mr. G. C. Whiteley, Barrister-at-law, Chairman of the Camberwell Vestry. Professor Bannister Fletcher is president of the Engineering Section, and Sir Guyer Hunter, K.C.M.G., of the Section devoted to Naval and Military Hygiene. A considerable number of most important subjects are to be discussed, and each discussion will be opened by one or more papers contributed by well-known authorities on the subject to be considered. Besides the various sectional meetings, two public mid-day conferences will be held. On Friday the discussion will be upon the Housing of the Working Classes, and Cardinal Vaughan, Mr. Walter Long, M.P., Alderman Williams, and other well-known men will take part. On Monday, the 30th inst., the Provision of Isolation Hospitals will be considered, when Lord Thring, K.C.B., Lord E. Fitzmaurice, Lord Francis Hervey, and Mr. Littler, C.B., are expected to speak. The working man is not forgotten, since Professor Crookshank will deliver a lecture on the Saturday evening on Microbes and Disease, and special invitations have been sent out to working men's clubs and institutes asking the members to attend. The social part of the programme is as full and varied as the scientific and business part, and includes a reception by the Lord Mayor (the honorary President of the Congress), Aldermen, and Common Council of the City of London, banquets by the Apothecaries' and Carpenters' Companies, an excursion to Hatfield, a creamery *fête* at Finchley, a gala performance at Drury Lane Theatre, garden parties, and minor entertainments too numerous to mention. The arrangements for the reception of the delegates and members have been made by an influential committee, of which the Lord Mayor is chairman; Alderman and Sheriff Sir J. C. Dimsdale presides over the finance department; whilst Dr. Thresh has had charge of the arrangement of the sections and conferences; Mr. H. C. Jones, clerk to the St. Giles' Board of Works, is the honorary secretary of the congress, and to him we must refer those who desire any further information.

BESTOWAL OF A BARONETCY ON DR. JOHN WILLIAMS.

IT was publicly announced on Monday last that Her Majesty had been graciously pleased to confer a baronetcy on Dr. John Williams. Such an act had not been unanticipated. Dr. Williams' recent attendance on the Duchess of York was only the last of a series of similar duties to members of Her Majesty's family. And we may well believe that the Queen was pleased to show her sense of such responsible services in this way. Her Majesty's act of grace is, we know, highly appreciated by the whole profession, which recognises in Sir John Williams a worthy recipient of a well-deserved honour.

THE BUDGET AND CHARITABLE LEGACIES.

WE cannot pretend to any right or ability to criticise all the various provisions of the Budget. Still we cannot but regret that the Attorney-General should have found it necessary, in opposing Mr. Butcher's amendment proposing to separate property passing at death to charitable institutions from the rest of the estate, to speak disparagingly of

charitable bequests. Such bequests constitute the backbone of our voluntary charities, and especially of our hospitals, which have been the pride of our country. Is the Attorney-General prepared to ask the Chancellor of the Exchequer to make good any failure in these bequests that may accrue from his words, or are the perplexities of the managers of our hospitals to be increased and the empty beds of London hospitals to be doubled in number.

THINGS OLD AND NEW IN SANITATION.

THOSE persons among us who adhere to the belief that there is nothing new under the sun are occasionally favoured with what appears to be a startling confirmation of their view. We are wont to think that sanitary science, for example, represents a work almost as novel and unique in character as are, for aught we know to the contrary, the latest facts of germ-pathology. Yet much of its method came into being long ago at the bidding of a shrewd empiricism. The recognition and management of contagia, notification itself, our latest safeguard, are to be found among the treasures of the antiquary. A reprint of the *Newes* of 1665, which now lies before us, describes at length a series of precautions employed in combating the plague of London in that year. These include the appointment of parochial examiners to investigate cases of sickness and to take measures for their isolation if needful and the employment of watchmen to ensure this result and of chirurgeons to certify the presence of plague. Notification of this disease was the duty of householders; every infected house was marked in the manner with which we are all familiar and underwent a quarantine of longer or shorter duration, and disinfection was carried out by airing with fire and by medicated fumigation. Nurses on the termination of a case were subject to twenty-eight days' seclusion, and visitors were forbidden the house of sickness. This latter arrangement might with benefit be copied in the practice of our own day more than it is. The disinfection of nurses and for that matter of practitioners in attendance (though these are less liable to absorb contagion) might with advantage be regulated with more system. As regards the former point particularly we find the most diverse opinions to be prevalent. Some definite and careful instruction, full enough for safety and practical for convenience, would be of the utmost service to all concerned.

COAL-DUST EXPLOSIONS.

IN perusing the second report of the Royal Commission on Explosives from Coal-dust in Mines, a copy of which has just reached us, we can find no evidence which would incline us to alter the views we have already expressed on this most important subject; indeed, the conclusions of the commissioners in this report convince us that the attitude we have adopted in regard to the question as to the explosive nature of coal-dust is right. In our opinion, the experiments of Mr. Hall, recounted in THE LANCET, Feb. 17th, 1894, were conclusive and established beyond all doubt that coal-dust is more to be feared than fire-damp. The commissioners come to practically the same conclusions when they observe that: (1) the danger of explosion in a mine in which gas exists even in very small quantities is greatly increased by the presence of coal-dust; (2) that a gas explosion in a fiery mine may be intensified and carried on indefinitely by coal-dust raised by the explosion itself; (3) that coal-dust alone without the presence of any gas at all may cause a dangerous explosion if ignited by a blown-out shot or other violent flame phenomenon (to produce such a result, however, the conditions must be exceptional and one only likely to be produced on rare occasions); (4) that different dusts are inflammable, and consequently dangerous in varying degrees, but it cannot be said with absolute certainty that any dust is entirely free from risk; (5) that there appears to be no probability that a dangerous explosion of coal-dust alone could ever be produced in a mine by a naked light or ordinary flame. On the question of precautions the commission have come to the conclusion that, whatever minor objections may be established against the use of high explosives, their general employment for shot-firing purposes in the place of gunpowder would greatly limit the risk of explosion in dry and dusty and in fiery mines. Finally, the commissioners express the opinion that the only sufficient precaution hitherto suggested against the dangers of coal-dust in fiery mines is a complete and satisfactory system of watering, and it should be within the powers of the inspector to declare, where he thinks it desirable, that the provision for watering the dust in a mine is insufficient, and to require such further arrangements to be made for this purpose as may be prescribed. There is some doubt as to whether precautions were taken in the Albion Colliery in South Wales, the scene of the recent terrible disaster in which nearly 300 lives were lost. Why such preventive measures were not immediately enforced in view of the fact that the dust of this mine was shown in the experiments of Mr. Hall to be exceedingly dangerous several months before the explosion we are at a loss to comprehend. The report was one which the Home Office should have immediately acted upon in spite of the labours of the commission not being quite completed.

THE DIFFUSION OF SMALL-POX.

LAST week witnessed a large decrease in the number of small-pox cases newly arising in London, 10 attacks being recorded, with 2 registered deaths. One death each occurred in Shoreditch and Marylebone. The patients remaining under treatment at the close of the week were 86 in the Metropolitan Asylum Hospitals, and 11 in the Highgate Small-pox Hospital, making a total of 97, against 170, 132, and 109 in the three preceding weeks. West Ham had but 5 cases last week, and Leyton only 2. One case each is reported from a northern and a western suburb. A few attacks occurred in the south-western counties, Plymouth and Bristol both being invaded. The midland counties continue to report attacks, but less numerously than heretofore. In Birmingham the cases freshly developing numbered only 14, and the registered deaths 2. There was a decrease at Walsall, 3 attacks occurring. At Willenhall some amusement has been caused by a communication addressed to the local board by a ratepayer on behalf of a "Professor" Edwards, whose marvellous experiences in the cure of small-pox have been put forward and the hope expressed that facility might be given him for a demonstration of his skill on any 20 patients whom the board might select. Needless to say that the authority allowed the matter to rest. From Lancashire comes news of several towns having been newly invaded. In Manchester there were 9 attacks and 1 death, whilst in the adjacent town of Salford there were 3 cases. Oldham had a few cases, and upwards of half a dozen occurred in Rawtenstall. Burnley and Preston again had experience of the disease. Dewsbury and Wakefield had each 4 cases, and other places in Yorkshire return attacks as having been reported. From Essex we learn of the absence of any provision for the isolation of cases in the Lexden and Winstree union being made the subject of a report by Dr. Cook, and that in consequence of such report the authority have decided to purchase hospital tents. It is sincerely to be hoped that these will speedily give way to more permanent provision in an isolated position when the authority have further considered the matter. In Edinburgh the small-pox epidemic has so far declined as to render unnecessary the use of the temporary hospital in the Cowgate, as to which so much ill feeling has been caused,

and now a protest has been raised against the temporary structure in the Queen's-park. A somewhat alarming outbreak, though of a mild character, has been recorded at the village of Letham, about six miles from Forfar. In all, to the beginning of last week, 14 cases of modified small-pox had occurred in two houses, and had led to the issue of bills to the effect that all persons in the district who had not been vaccinated were to be vaccinated at once, whilst those who had not been vaccinated for some time were recommended to resort to revaccination. Arrangements have been made in accordance with these requests.

THE EFFECT OF TIME ON THE MEMORY OF MOVEMENT.

DR. SCHNEIDER of Jurieff (Dorpat), acting on the advice of Professor Ciz, has made a series of observations on the effect of the lapse of time upon the memory of movements. These are published as a graduation dissertation (in Russian). The method adopted was to fix the right arm of an intelligent person, so that only the wrist could move, and to tie a pencil to the forefinger, so that a curved line could be marked on a piece of paper ruled in millimetres. The person was blindfolded and requested to draw a line, and, after a definite interval of time, he was asked to draw another as nearly as possible of similar length; the length of this was compared with that of the first line, and the error noted. Altogether 4000 experiments were made with three individuals, the mean error after half a minute being $\frac{1}{20}$th; after 2 minutes, $\frac{1}{12}$th; after 6 minutes, $\frac{1}{9}$th; after 10 minutes, $\frac{1}{8}$th; after 15 minutes, $\frac{1}{7}$th of the length of the original stroke, thus showing that the memory of movements grows rapidly less and less accurate even during the first few succeeding minutes.

MIRROR WRITING.

IN a recent issue of our contemporary *Fairplay* an interesting example is given of a letter written by a little girl of eleven. It is a duplicate letter, or rather a two-handed letter, for the two copies are said to have been written simultaneously; but while one was written in the ordinary way with the right hand, the other was written with the left hand and is an excellent specimen of what is known as mirror writing. The condition has puzzled our contemporary, to whom it suggests some abnormality in the lenses of the eye; but it is difficult to understand how such an abnormality would have any bearing upon the case or how it would account for the reproduction of reversed images by the left hand and not by the right. As a matter of fact the condition is not nearly so uncommon as our contemporary supposes, although, perhaps, it is not usual to meet with such a marked case in early life. Many left-handed people have great facility in writing in this way, and it is really the natural way in which writing would be done with the left hand. It is taken advantage of by such as can use it freely and readily in writing, say post-cards, for it is a simple and easy way of concealing the meaning, so long as those through whose hands the document passes are ignorant of the simple solution. For this it is only necessary to hold it before a mirror, when the writing appears as ordinary left to right writing. Hence the name "mirror writing" is the one commonly applied to it. As regards its explanation it is not easy to understand that mirror writing would be naturally used in writing from a copy, because even if it were, in an automatic way, a comparison of the copy with the original would at once show the difference; but, on the other hand, in writing without a copy the mental image will, in the case of one who reproduces it with the right hand, fall into certain lines and curves produced in a certain way, while if the left hand is used the lines and curves will naturally be written in the reverse way—the way easiest for the left hand. It may be asked, Why then does not everyone who tries to write with the left hand not write mirror writing? This, we believe, depends upon the strong association which years of habit have formed between the mental picture of the word and its actual reproduction on paper, an association so strong that the mind, as it were, rebels and forces even the left hand to reproduce the familiar form. In left-handed people this reversed writing is, as we have said, not uncommon when the left hand is used. In a certain proportion of others who have never written with the left hand the attempt to write a given word with the left hand will naturally be made in the right to left and reversed form. Thus it is sometimes seen in the case of patients who, having lost the use of the right hand, in trying to write with the left naturally write mirror writing. But it is uncommon, as we have hinted, probably on account of the strength of the bond between the mental image and its concrete symbol.

FEMALE HEALTH VISITORS.

MR. PAGET, in his annual report for the borough of Salford, remarks that the health committee of the Ladies' Health Society of Manchester and Salford secured during 1893 the services of six female health visitors, who act not only as reporters of nuisances, but also endeavour to educate the poorer classes in the matter of general cleanliness, both as regards their homes and their children. Since the end of July the visitors paid 14,154 visits to dwelling-houses in certain districts of Salford, and reported the nuisances they discovered to the medical officer of health. While withholding a full expression of opinion upon the subject of female visitors, Mr. Paget states that he takes a favourable view of the work that has been done, and he thinks it not improbable that it may be found advantageous to extend the practice. We see, too, by Dr. Niven's return for the first quarter of 1894 that in Manchester the female district visitors paid 13,232 house-to-house visits. These visitors made on behalf of the medical officer of health 733 special inquiries into cases of infectious disease, and also 413 special reports as to sanitary defects detected by them on their daily visits. Obviously this agency must constitute a considerable force in the sanitary administration of Manchester and Salford.

DEATHS IN PUBLIC INSTITUTIONS IN LONDON.

THE fact that more than a quarter of the deaths registered in the Metropolis are recorded in its large public institutions is not generally realised, and deserves more attention than it receives. The Registrar-General's annual summary for 1893 shows that no fewer than 24,598 of the deaths registered in London in that year were recorded in workhouses, hospitals, and lunatic asylums. The proportion of these deaths to the total deaths in London was 26·9 per cent., and very considerably exceeded the mean proportion of such deaths in the thirty-three large English towns, which was 19·2 per cent. in 1893. The percentage of institution deaths in 1893 ranged widely in these thirty-three towns, from 5·9 in Burnley, 6·1 in Gateshead, 7·0 in Preston, 7·1 in Swansea, and 7·5 in Bolton, to 18·7 in Wolverhampton, 19·1 in Manchester, 19·5 in Liverpool, and 20·1 in Bristol. The 26·9 per cent. of deaths in the London institutions may be classified as follows:—13·1 per cent. in workhouses and workhouse infirmaries, 2·4 per cent. in the metropolitan asylum isolation hospitals, 9·6 per cent. in other hospitals, and 1·8 per cent. in public lunatic asylums, including the metropolitan asylums for imbeciles. Thus 17·3 per cent. of the metropolitan deaths occurred in rate-supported institutions, and nearly 10 per cent. in hospitals supported mainly by voluntary contributions. It should be pointed out that the proportion of deaths in workhouses in London has shown a marked increase during the last four years, and is now not

very far short of being twice as large as the mean proportion in the rest of England and Wales. It is, however, noted in the annual summary that this marked increase in the proportion of persons who end their days in the workhouse does not appear to indicate a corresponding increase in the mean number of persons constantly in receipt of in-door relief. Indeed, the mean proportion of in-door paupers in London was 13·8 per 1000 in the four years 1890–93, and was slightly lower than it had been in the five preceding years 1885–89, when it was 13·9 per 1000. While, on the other hand, the proportion of the total deaths in London occurring in workhouses, which had been 11·8 per cent. in the earlier period, rose to 13·2 per cent. in the four years 1890–93. As this increase of mortality in workhouses is evidently not due to an increase in the number of the inmates of workhouses, it must either be due to a really higher death-rate among in-door paupers, which may to some extent be the real explanation, owing to the recent prevalence of epidemic influenza; or it may be, and very probably is, due to an increasing use of the metropolitan workhouse infirmaries as hospitals for the working classes, a tendency which, bearing in mind the vast improvement in these institutions in recent years, appears to have but one drawback—the steady increase in the local rates, which now press so hardly upon the lower middle classes. This increase in the proportion of workhouse deaths in London calls for careful investigation at the hands of the Local Government Board, in order that its cause may be more definitely determined.

SMALL-POX AND THE VACCINATION ACTS AT BRADFORD.

THE sanitary committee of the Bradford corporation have quite recently forwarded to the guardians of the same union a resolution expressive of their opinion that the small-pox from which Bradford has lately suffered was in great measure due to neglect on the part of the guardians to enforce the Vaccination Acts. The vaccination committee deny in emphatic terms that any neglect on their part in any way contributed to the epidemic; moreover, they call in question the right of the health committee to interfere concerning the duties of the Poor-law authority. At the same time the vaccination committee draw attention to the fact that the greater part of the small-pox patients were adults; but we find that of the unvaccinated patients in 1893 more than 50 per cent. of the cases were in children under fifteen years of age. The guardians assert that they have stopped short only of prosecution in their endeavours to secure compliance with the law, and they saddle the Royal Commission on Vaccination with the responsibility of their present action. Whatever is the cause, there can be no doubt that vaccination in the Bradford union has been for some time getting into a worse and worse state of backwardness. In the five years ending 1877 the number of children escaping vaccination was 1887, or 5·8 per cent. of the births; in the next five years this number increased to 2328, or 7·4 per cent.; and in the succeeding quinquennium the total of escapes was 2133, or 7·3 per cent. From 1885 to 1889 the numbers avoiding vaccination steadily increased from 396 to 1199, and the percentages of default have been respectively 7·1, 8·0, 10·5, 14·0, and 20·6, and we doubt not that when the subsequent years' figures come to be published more substantial retrogression still will be shown. The figures we have quoted take no note of children who died unvaccinated. In these circumstances we think the sanitary committee were quite justified in their resolution—at least, in so far as they aimed at an enforcement of the existing law. The vaccination of persons resident in the borough is a matter which very closely affects the public health; and the mere fact that the Poor-law authority is by some freak of legislation the custodian of the public health in the matter of administration of the law of vaccination should not suffice to silence the body which is charged with the enforcement of sanitary laws on other subjects. It may well be that the very commission which is referred to as having led the guardians to adopt their half-hearted policy will as its next step propose to dissever vaccination entirely from Poor-law administration. We sincerely hope that it may be so and that sanitary bodies will in this matter, as in all other matters affecting public health, be charged with the local administration of the law, even to the extent of enforcing revaccination as well as primary vaccination.

WORKHOUSE INFIRMARY NURSING.

SIR DYCE DUCKWORTH pleads in a letter to the *Times* for help for the Workhouse Infirmary Nursing Association, begun fifteen years ago. Its objects are, first, to raise the standard of public opinion in regard to the whole question of workhouse nursing; secondly, to secure the appointment of trained ladies as matrons in all separate infirmaries; and, thirdly, to train and supply nurses to workhouse infirmaries in London and the provinces. Such objects must command the sympathy of all who reflect on the case of the inmates of workhouse infirmaries, in which the conditions of hopeless infirmity or disease and comparative friendlessness too often meet. We have but lately noticed this subject in connexion with a training school for workhouse nurses at the Mile-end Infirmary, but we have much pleasure in reverting to the subject and endorsing the appeal of Sir Dyce Duckworth. Donations or subscriptions can be paid into the account of the association, Lloyd's Bank (Twining Branch), 215, Strand, W.C.

SEMMELWEIS INTERNATIONAL MEMORIAL.

THE committee which has been formed in this country, under the presidency of Sir Spencer Wells, to assist in raising a fund towards the erection of the above memorial held their final meeting last week. Dr. Cullingworth, the hon. treasurer of the fund, handed in a list of 100 subscribers from Great Britain, Ireland, and India. Dr. Boxall, the hon. secretary, reported that the invitations to the colonies to contribute to this fund had met with response only from Canada and Barbadoes. It was announced that 1000 florins had been already transmitted to the central committee at Budapest, and that, after deducting expenses, about 100 florins more remained to be transmitted. Votes of thanks were passed to the chairman, treasurer, and secretary for the services which they had rendered in raising the fund, and Dr. Duka, on behalf of the central committee, thanked the subscribers generally.

SWIMMING A NECESSITY.

IT is hardly possible that a nation so thoroughly imbued as our own with the desire for physical exercise should fail to devote an important place in its educational system to the training of the body. Such an error, if committed, would bring about its own swift and certain discredit. Notwithstanding our natural zeal in a matter so important, however, there is one chief means of muscular development which is still liable to be somewhat overlooked, the art of swimming. Yet a knowledge of this useful accomplishment is of the most vital consequence. Had it been fairly understood by an unfortunate employé at the Earl's Court Water Show, who was recently drowned at the bottom of a "chute," his escape would have been as easy and as natural as his immersion. Surely no stronger argument is needed to impress the necessity of teaching every boy and girl while at school to swim than the mere statement of this easily preventable disaster. Swimming is very readily learnt and occupies very little time in the learning—a fortnight should quite suffice. There only comes in the way the inconvenience of bathing space or of a spare half-hour daily or less often in which to practise

it. It is high time that such trivial excuses and obstacles were set aside or met and overcome. Swimming, moreover, may be learnt at any age, though doubtless, like many other similar accomplishments, it is more easily acquired when young. The unfortunate man, though long past school age, might still have taught himself. Many of his class are now devoting themselves to the development of this form of self-culture. There are swimming clubs and challenge cups for the encouragement of workmen competitors and more such are in process of creation. Every *bonâ-fide* institution of this kind requires, and we trust will obtain, the practical assistance of public sympathy. It is never too late to mend, and it is never too late or too early to amend the culpable ignorance of a mere muscular habit, the knowledge of which would have saved the lost lives of innumerable persons, young and old. As a move in the right direction we are pleased to observe that the City Commissioners of Sewers have determined to take steps towards the construction of baths and washhouses for the City.

A FIELD FOR EXPERIMENTAL DRAINAGE.

THE question of drainage in the new residential neighbourhoods created by the extension of the Metropolitan Railway from Baker-street into Hertfordshire and Buckinghamshire has not apparently received much serious consideration. In breaking into a new country the railway company has brought within easy reach places which, in point of natural beauty, are perhaps second to none within a like radius of Charing-cross, and has entirely altered the character of the country villages placed near the recently built stations. They are rapidly becoming suburbs, and bid fair to be popular. It is, therefore, somewhat surprising to find that such a district is still satisfied with the old and objectionable cesspool system of drainage. At the present time, when we are constantly hearing of new processes for the treatment of sewage, such districts would seem to present an admirable field for experimental purposes in connexion with any new process which may theoretically be considered satisfactory. Experiments have hitherto been conducted at some distance from the metropolis—as, for instance, at Tadcaster, which involves a long journey from London in order to witness a new process in operation. We should have thought the occupiers of property in the neighbourhoods referred to would in their own interest have considered it advisable to take steps to obtain a good system of drainage so as to prevent difficulties which may arise as the population increases, and with difficulties of such a nature rural sanitary authorities are, as a rule, unable to cope.

THE 4*s*. GRANT FOR PAUPER LUNATICS.

AT the Local Government Conference, which was held at Gilsland last week, Dr. Campbell, medical superintendent of the Cumberland and Westmorland Asylum, read a paper on the Operation of the 4*s*. Grant for Pauper Lunatics and the Expediency of giving it for Patients satisfactorily kept elsewhere than in Asylums, as in Scotland. He pointed out that the effect of the Act of 1874 giving 4*s*. a week for each pauper patient had been to empty the workhouses of all the cases which it was possible by any device to send to an asylum, and to remove the last vestige of any desire there might have been to retain pauper patients in any sort of house outside an asylum. In January, 1874, the total paupers numbered 832,370, whereas in January, 1893, there were only 735,597. In January, 1874, the number of pauper lunatics was 53,375, but in January, 1893, it was 83,893. Dr. Campbell said there was a consensus of opinion that the 4*s*. grant, as at present administered in England, had been one of the causes of asylum extension in this country. In Scotland the grant was extended in 1875 to lunatics kept elsewhere than in asylums to the satisfaction of the Commissioners in Lunacy. In Scotland the pressure on the accommodation provided by the asylums had not been at all in proportion to what it had been in England, and this was no doubt due to the mode in which the grant had been given. Asylum treatment was not required in numbers of cases that were sent to asylums in England. Ordinary food and nursing were all that was required in such cases, and why should not that be supplied in workhouses? He concluded by expressing a hope that the conference would pass a resolution in favour of the extension of the 4*s*. grant, so as to include lunatics kept elsewhere than in asylums. After a discussion, in which several members of the conference took part, a resolution, as suggested by Dr. Campbell, was unanimously passed, with the intention of bringing the matter before the notice of the Government authorities.

THE preliminary arrangements for the Eighth International Congress of Hygiene and Demography are now practically concluded. As some evidence of the widespread interest taken in its proceedings, and as an anticipatory mark of success, we may mention that 725 papers have been notified, of which 593 belong to the Hygienic and 132 to the Demographic division of the Congress.

THE eighth meeting of the International Ophthalmological Congress will take place at Edinburgh during the second week of August. The last meeting was held at Heidelberg in 1888. About 300 ophthalmic surgeons from different countries, many of them Americans, are expected to attend. The President of the Congress is Dr. Argyll Robertson, the General Secretary being Dr. George Berry.

THE Church Sanitary Association will hold its second annual meeting, by the kind permission of the Duke of Westminster, K.G., at Grosvenor House, London, on Thursday, July 26th, at 3 P.M., Surgeon-General Sir Joseph Fayrer, K.C.S.I., in the chair.

HER ROYAL HIGHNESS THE DUCHESS OF YORK has graciously consented to become a Vice-patron of Queen Charlotte's Lying-in Hospital, of which Her Majesty the Queen is Patron and Her Royal Highness the Princess of Wales a Vice-patron.

BRIGADE-SURGEON-LIEUTENANT-COLONEL J. LANE NOTTER, Professor of Military Hygiene in the Army Medical School, Netley, has been appointed External Examiner in Public Health for the Victoria University.

WE much regret to have received the announcement of the sadly sudden death of Dr. Herbert Goude, resident surgeon to the Small-pox and Vaccination Hospital, Highgate-hill.

THE annual prize distribution at Epsom College will take place on the afternoon of July 30th, which is the anniversary of Founder's Day.

Pharmacology and Therapeutics.

THE STUDY OF PHARMACOLOGY IN INDIA.

NOTWITHSTANDING Chloroform Commissions and Cholera Commissions, local opinion seems to be adverse to the study of pharmacology in India. The Principal of the Grant Medical College and the Surgeon-General to the Government of Bombay think that in the climate of Bombay a

pharmacologist would labour under great disadvantages as compared with a similar investigator in Europe, and that results obtained in Bombay would be less definite and reliable than experiments conducted in a cooler climate. Accordingly no pharmacologist is to be appointed in Bombay.

The reasoning is not very clear. The disadvantages do not seem very obvious. Is it a question of temperature or of temperament which should render results less definite and reliable? If the competency of the investigator could be trusted, surely drugs of local origin might best be tested when fresh. Perhaps, as with many forms of criticism, it is felt better to get a broader view from a distance. Possibly the disturbing influence is not climatic, but rather a dread of local colouring.

Local colouring has always to be reckoned with in pharmacological reports. Picturesque details and inflated adjectives can mostly be fairly gauged. For scientific reports, as for monetary transactions, a fair rate of exchange might be easily drawn up. The personal equation has long been allowed for: might not similar allowances be made for the racial or climatic equation?

Doubtless some European drugs may not travel well, and results of experiments in Bombay might not accord with those obtained in a cooler climate. But this question should surely form a fitting subject for investigation. In a negative sense, science is still the gainer, even if it is found necessary to label new synthetic compounds "made in Germany, but of no use in Bombay." This result could scarcely be anticipated from even the closest researches of a Teuton.

The unkindest cut of all lies in the emphasis made in the official report on the need for "extreme care" and for "every precaution to exclude fallacious results." "Conclusions to be drawn from any series of experiments require much thought and discrimination, even from the greatest scientist." The use of the words "*even from*" ought to be duly appreciated. The summing up of the matter is that it would "be expedient rather to make provision for the investigation in Europe of the properties of Indian drugs than to attempt experiments in Bombay."

It is but a step from India to China, from which comes an account of the therapeutic activity of the lizard. It is said to be in great demand for making "lizard wine," which is used as a tonic and also to cure eye diseases. The other ingredients of this wine are not mentioned. Doubtless the name of the one is sufficient—for those who like lizards. Other choice Chinese drugs are said to be prepared from petrifactions of crabs, horns of rhinoceroses, paws of bears, tigers' bones, and sundry other more repellent substances.

The recent researches of Beauregard and Pilliet teach a certain amount of humility, even when thinking of Chinese drugs. They have been examining the perfume glands of the beaver, the source of castoreum, which not long since was included in the British Pharmacopœia; and they have come to the conclusion that castoreum is only the preputial smegma of the castor fiber, or beaver. Presumably it had long passed out of use before the official recognition—which is strongly conservative—was withdrawn. Who can wish it back again, now we are told what it is?

LACTIC ACID IN CORNEAL ULCERS.

As, according to Mosetig von Moorhoff, lactic acid possesses the power of acting on diseased tissues while leaving healthy parts unaffected, Dr. Dolzhenkoff determined to try it in the treatment of corneal ulcers, and appears to have been well satisfied with the results obtained, an account of which is published in the *Vestnik Oftalmologi*, May and June, 1894. In chronic trachomatous ulcers complicated with photophobia and marked dilatation of the vessels around the cornea, the patients, after a single application of lactic acid, were able the very next day to look about them without any pain, and the red zone of dilated vessels disappeared. Lactic acid was also useful in annular corneal ulcers affecting more than half the cornea. In six of these cases one application was sufficient to prevent the ulcer making any further progress. Again, in extensive ulcers of the cornea of a contagious character affecting the greater part of the cornea the treatment succeeded beyond expectation. The method of application employed was by means of a pointed bit of wood dipped in a fifty per cent. solution of lactic acid. With this the ulcerated surface was carefully touched, an eschar forming which fell off in three or four days, leaving healthy cornea underneath. If by chance the healthy part of the cornea was touched only the epithelium was damaged, and the spot had quite healed by the following day.

ANTITOXIN IN DIPHTHERIA.

Dr. Katz has reported to the Berlin Medical Society very satisfactory results obtained by the use of Aronson's antitoxin for diphtheria in the Emperor and Empress Frederick's Hospital for Children. From the beginning of the present year up to March 14th, 86 cases were treated according to ordinary methods, with 38 deaths, or a mortality of 41·8 per cent. From March 14th to June 20th, 128 cases were treated by the antitoxin, with 17 deaths, or a mortality of 13·2 per cent. An injection of from 5 to 25 cubic centimetres of the antitoxin, according to the age of the child and the gravity of the case, was administered in the back below the scapula, and if the child were not better the next day a similar dose or a somewhat smaller one was given. Of these 128 cases tracheotomy was performed on 17, with 5 recoveries, and intubation on 5, all of whom recovered. The prophylactic effect of the substance, which is said to be innocuous, was also to some extent demonstrated, 72 of the brothers and sisters of the affected children being given an injection, with the result that 8 only of these contracted the disease, and only in a very mild form. Afterwards 38 other brothers and sisters of patients were given a larger dose, and all these escaped entirely. Dr. Katz remarks that in the annals of the hospital there has never been so favourable a result in a series of diphtheria cases as since this antitoxin has been employed. It should be remarked that there are various diphtheria antitoxins before the medical public at present, notably one used by Behring and Kitasato, which also gave most satisfactory results in the Berlin hospitals.

ASPECTS OF PUBLIC HEALTH IN THE SCANDINAVIAN CAPITALS.

(BY ONE OF OUR SPECIAL COMMISSIONERS.)

II. STOCKHOLM.

IN his work on "Public Health in Different Countries of Europe"[1] Dr. Palmberg of Helsingfors, in Finland, says that Stockholm disputes with Brussels the honour of possessing the best sanitary organisation of any continental capital; and certainly there are many points of resemblance in the management of the health office in the two cities, as both are occupied with very much the same work and pay particular attention to the collection of statistical matter. Stockholm, however, is superior to Brussels in its arrangements for isolation hospital accommodation, while it is inferior in matters relating to abattoirs and the inspection of meat. The yearly report of the medical officer of health enables one to see how wide a field his department extends over, covering as it does, not only much of the ordinary work of a medical officer of health at home, but also the supervision of the medical attendance on the poor, vaccination, school hygiene, the regulation of prostitution, and the collection of statistics as to the number and causes of death in the hospitals. The situation of Stockholm, just where the waters of Lake Maelar discharge themselves into the Baltic, leaves (in summer at least) very little to be desired from the sanitary point of view. The force of the stream as it sweeps through the city, although the volume is much greater, reminds one not a little of the Iser at Munich. The ground on which it is built consists almost entirely of granite. Open spaces abound and the numerous islands, which add so much to its charm, are made easily accessible by frequent steamers as places of public resort. There is, too, such a diversity in the style of architecture of the buildings that the monotony of aspect, so often met with in modern continental streets, is entirely lacking. The streets, except in the oldest part of the town, are broad, well-paved, and are kept beautifully clean. The drawback, of course, is the long and severe winter. The average temperature during the three winter months is 22° F., during which time the harbour is usually ice-bound. The population in January, 1893, was 249,246. In 1892 the birth-rate was 29 and the death-rate 20·3 per 1000. Stockholm is a good example of a city whose death-rate has steadily diminished with the introduction of a wisely directed sanitary administration, and illustrates also the fact that this end can be attained without the introduction of

[1] A Treatise on Public Health, and its Applications in Different Countries in Europe. By A. Palmberg. Translated and edited by A. Newsholme, M.D.

the "tout à l'égout" system. Dr. Linroth, the very able medical officer of health, has minutely tabulated the mortality statistics between 1871-90, according to sex, age, time of year, and city parishes.[2] In this work he demonstrates the diminution in the death-rate in the four quinquennial periods as follows:—

1871–75	35·3 per 1000
1876–80	25·7 ,,
1881–85	24·2 ,,
1886–90	20·8 ,,

The diminution has shown itself in all the three principal groups of disease—namely, diseases of the respiratory organs, which include one-third of all causes of death, diseases of the alimentary system, and the infectious diseases. In the last of these, indeed, during the time stated the decrease was over 50 per cent. Illegitimate births are very high, having been in 1892 28·2 per cent. of all births. The infant mortality (1886–90) was 175 per 1000. The death-rate from the seven principal zymotic diseases was in 1892 3·1 per 1000, the phthisis death-rate was 2·87, and that of typhoid fever only 0·18 per 1000.

WATER-SUPPLY.

The water-supply of Stockholm is drawn quite close to the city from a small branch of Lake Maelar known as Arstaviken. The situation of the present intake has both its advantages and disadvantages. Amongst the latter is the fact that it is placed at the dead end of this somewhat narrow arm; consequently the water has very little movement and is inclined to be flat. Its advantage lies in the fact that occasionally, for a period of a week or two every year, the surface level of Lake Maelar is a little below that of the Baltic Sea, and when this is the case naturally the flow is from the Baltic into the lake. A mixture of the salt and fresh water then takes place, and if the intake were in the body of the lake the water might be so brackish as to be undrinkable. The present site, two and a half miles up this narrow arm, prevents a mingling of the two kinds of water to any such extent as prejudicially to affect its potable quality. In the body of the lake for a distance of forty miles above Stockholm, as is shown in a careful report on this matter by Dr. Sonden, chemist to the Health Office, the two kinds of water can be traced—the lighter fresh water at the top and the heavier salt water at varying depths below. The percentage of sea water in Arstaviken varies from 0·2 to 1·0 The analyses of Herr Ekendahl, chemist to the waterworks, carried out after Frankland's method, show that the water belongs to the type known as upland surface. The following are fairly typical samples of the water before and after filtration.

—	Parts per 100,000.							Bacteria per c.c.
	Solid matter.	Organic carbon.	Organic nitrogen.	Nitrogen as nitrates and nitrites.	Ammonia.	Chlorine.	Hardness.	
Before filtration ...	14·2	0·618	0·044	Trace.	—	4·7	5·7	136
After filtration ...	14·8	0·424	0·040	Trace.	—	4·0	6·6	56

Sometimes the chlorides, however, under the conditions alluded to above, run up to more than twenty parts per 100,000, although the organic carbon and nitrogen are hardly affected. The present waterworks date from 1860 and consist of eighteen filter beds with the necessary pumping stations. They are under the direction of Herr Alrutz. Most of the water is pumped directly on to these beds from the lake, but an additional supply is obtained from seven wells sunk at varying distances from the lake into which the water percolates, passing on its way through a sandy soil. The water from these wells, although it has undergone a natural filtration, is made to pass through the sand filters before distribution, and their chief advantage lies in the fact that they render the water a little warmer in winter and colder in summer. Ten of the filter beds have each an area of 775 square yards; the remaining eight are a little smaller. They are all quite open. The vaulting over of filter beds in cold climates, as has been done in the Berlin waterworks both at Tegel See and the new beds at Friedrichshagen, must be considered advantageous, as it prevents the water freezing during winter and allows a regular cleaning of the sand to take place. The layers composing the filter beds do not differ much from the usual type. In 1892 the average consumption daily was 18·4 gallons, and the greatest amount used in one day was only 27·2 gallons. This small consumption is, of course, largely due to the absence of waterclosets. The charge for the water is 2*s.* 6*d.* for every room, or, if taken by meter, about 2*d.* per thirty-five cubic feet. Herr Ekendahl, who has his laboratory at the waterworks, has now for several years been making periodical bacteriological examinations, and for the past four months he has been making daily such examinations for five of the filter beds, of the water both before and after filtration. The method he adopts is that introduced by Koch. He is rather of the opinion that too much stress is laid in Germany on the mere number of bacteria found in a water as determining its potable quality, and does not agree with the view that a filtered water containing more than 100 bacteria per c.c. should be rejected, quite apart from the difficulty of practically carrying it out. He would, of course, agree that in many cases an increased number of bacteria in the filtrate points to some defect in the filtering process, but he considers the fact that certain harmless bacteria have a peculiar faculty of developing in the filter beds is rather lost sight of. More attention, as Dr. Migula of Carlsruhe has pointed out, should be directed to the number of different kinds of bacteria found in the water and their nature than to the mere number per c.c.

DRAINAGE.

The drainage of Stockholm is arranged on the plan of carrying the rain water and slop water from the houses into Lake Maelar. There are six main openings, and the volume of the water into which the sewers discharge is so great that one can stand over them and not be in the least aware of their presence. Only one, and that from the least inhabited part of the city, empties into Arstaviken two and a half miles from the intake of the waterworks. Efforts are being made to divert what little does find its way in this direction into other channels. The sewers are mostly constructed of granite, and their formation is a matter of considerable difficulty and expense, as their track has to be laid in the solid rock.

The water-carriage system is deemed out of the question owing to: (1) the extreme cold in winter; and (2) the occasional backflow from the Baltic into Lake Maelar, which, it is thought, might carry infective matter into Arstaviken. It should be said, however, that with regard to the second point the careful investigations of Dr. Sonden show that the danger is infinitesimal, and that if the watercloset system were introduced (and it has its supporters) the increased impurity of the water due to it would not be detected by chemical means. It would be a matter of considerable difficulty to introduce in Stockholm what are considered essentials of the water-carriage system, as, for instance, that all soil-pipes should be outside the house and through ventilation of the same. Even in Berlin, where the system has been universally introduced, one is bound to admit that the arrangements there do not offer anything like the same security against the entrance of sewer air into the house as do those in England. The disposal of the night soil is managed much better in Stockholm than in Christiania, chiefly because there are no cesspits, the pail system being universal, and the fact that the sanitary authority itself undertakes the work of removal and does not hand the matter over to contractors. In 1892 new regulations were passed compelling householders to replace wooden pails by those made of steel. They are removed every fortnight, which certainly seems none too often, or whenever notice is given by the householder. Every removal costs 7*d.* A lid, which screws down tightly, is placed on the pail before it is taken away. Dustbins are emptied every day, and the contents, together with the pails, are removed in special waggons by railway to the depôt at Riddersvik, ten miles above the city on Lake Maelar. The town has no particular reason to be proud of this station at Riddersvik, and it is very much to be hoped that a city like Stockholm, so admirable in its arrangements in many respects, will soon have more solid and suitable buildings than exist at present. An experimental shed has been erected here for making *poudrette* by mixing the contents of some of the pails with dried peat. The results so far have been very good, and the *poudrette*, which does not contain more than 8½ per cent. of peat, fetches a good price from the farmers.

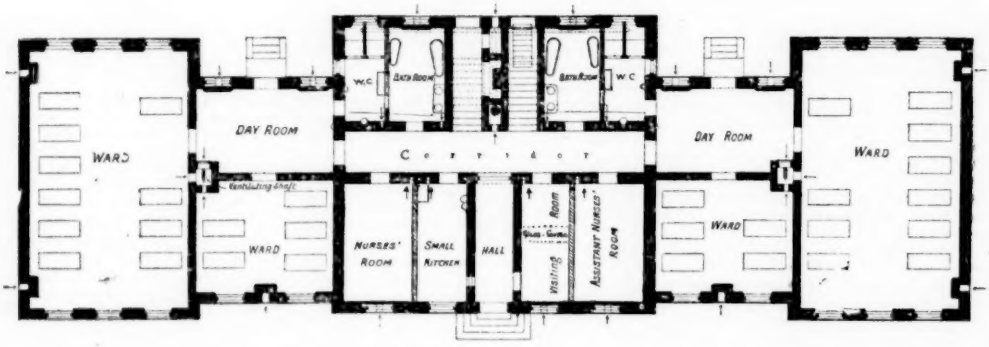
ISOLATION HOSPITAL.

Compulsory notification of infectious disease has been in

[2] Dödsorsakerna och Dödligheten i Stockholm, Af Prof. K. Linroth.

force for several years, and the means for getting every advantage from this by the provision of an isolation hospital, disinfecting station &c. are now very complete; in fact, the new isolation hospital is quite one of the best of its kind to be found abroad. The scheme for its construction was drawn up by Dr. Linroth in 1884, and, although opened since September, 1893, one pavilion yet remains to be built to complete the plan. It is well situated on a small rocky hill on the outskirts of the city near one of the poorest quarters. The grounds extend over fourteen acres. There are five one-storey pavilions thirty-two yards distant the one from the other, solidly built of stonework, and intended for the reception of cases of scarlet fever, measles, diphtheria, typhus fever, and small-pox. In addition there are the administrative block, kitchen, observation pavilion, disinfecting station, mortuary, and ambulance station. Minute attention to detail has been paid in the construction, yet all the arrangements are so simple and ready to hand that there is no difficulty in at once getting a correct idea of the working. The floors are of cement mosaic, the walls oil painted, all

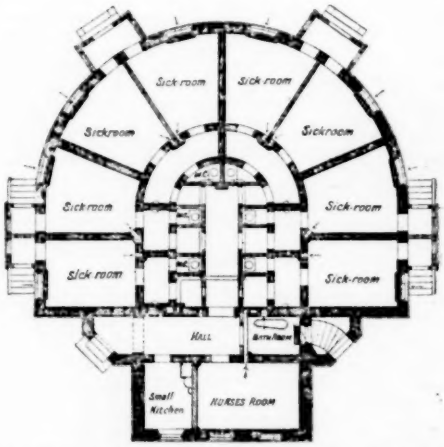
FIG. 1.



angles rounded off, and glass and iron replace wood wherever possible. The windows are double because of the winter cold. Ventilation is effected by large extracting shafts, the air entry being directly from the outside, and provision is made for warming the in-coming air. Heating is done by steam radiators. The wards are all on the same plan, and a glance at the accompanying plan will make their construction plain. A corridor in the middle divides the central block into two distinct halves. The one half is exclusively for the entrance of the patients; the other for that of the hospital staff &c. The corridor at either end opens into a day-room, and this again directly into a ward with ten beds, while to the side of it is a small ward with five or six beds. In each pavilion is a visiting room, where convalescents can speak with friends, isolation between them being ingeniously maintained by a glass screen reaching half-way up to the ceiling. The observation pavilion is original in plan. It is semicircular in shape. The small sick-rooms are placed round the periphery and are entered directly from outside. They have but one bed each, but are large enough to hold two should a member of the family wish to remain with the patient. Two pairs of rooms are so arranged that, if necessary, one can be occupied by the patient and the other by the nurse; or, again, two or more can be thrown into communication and be controlled by one nurse. In connexion with the administrative block is a double set of baths—one for the physicians, the other for the nurses, to be made use of before going into the town. A linen overall is worn by the physician when making his rounds, and is always changed on going from one ward to another. What has been said as to the arrangements in this isolation hospital might stand almost equally well for those existing in the new general hospitals. Here the principle of asepsis, as distinguished from antisepsis, in the treatment of surgical cases is minutely carried out. The operating theatre of the new Serafimer Hospital leaves nothing to be desired in this respect, all the latest improvements for obtaining sterilisation of instruments, dressings, and water being on the spot. It is the strict attention to detail, when once a principle is recognised as correct, that strikes one most in these continental hospitals.

The station for disinfection is situated in the southern part of the city and has existed since 1885. As in Christiania, but on a more luxurious scale, there is accommodation for the members of the household during the time required for the disinfection of the house. There are two large disinfecting ovens, where steam at a temperature of 100°C. and under a pressure of 10 lb. comes into contact with the goods for half an hour. Of course the *personnel* on the infected and disinfected sides is quite distinct. Disinfection after deaths from phthisis is becoming more and more common. In the dwellings sulphur fumigation is never used. Washing the walls with corrosive sublimate (1 in 1000) has been and is done, although, since mercury has been traced in the urine of some of those living in the rooms so treated, the method is being replaced by the tedious Berlin method of rubbing the walls with bread and washing them and the furniture afterwards with a 5 per cent. or 2½ per cent. solution of carbolic. This question of the use of corrosive sublimate in house disinfection is an important one. Anyone who has seen it used in Paris, where it is almost universally employed in the form of a "pulvérisateur," must be struck by the ease and simplicity of the method, and I am not aware of any bad results having been attributed to it there. A quarantine station exists on one of the little islands below the city.

FIG. 2.



Stockholm both in 1892 and 1893 remained perfectly free from cholera.

MEAT INSPECTION.

It is surprising that the city is without an abattoir and carefully controlled system of meat inspection. It is not that these are deemed unnecessary, as it is estimated that 50 per cent. of the cattle are more or less affected with tubercle. Trichinosis and anthrax, too, are not infrequently met with in Sweden, but as uncooked ham is never eaten the danger

from the former is not so great as in Germany. At present private slaughter-houses exist, and the meat inspection is under the charge of two veterinary surgeons, twelve inspectors, and ten microscopists, who examine the pig's flesh as to the existence of trichinosis. The inspectors go round the shops and markets and carry to the inspection station any meat they think is suspicious. In 1892 the seizures of beef amounted to 234 pieces, of which 45 were for tubercle; of pork and ham 422 of which 111 were for tubercle and 91 for trichinosis; of veal 507; of mutton 88; and of horseflesh 50. It is fully expected that in a year or two the city will proceed to the building of an abattoir, and a detailed scheme for this has been drawn up. The estimated cost is £100,000.

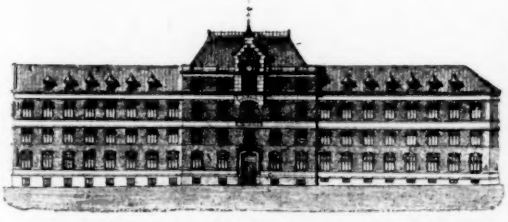
ANIMAL VACCINE STATION.

In connexion with the meat inspection station is that for the preparation of animal vaccine (the only one in Sweden), under the direction of the two veterinary surgeons. Very young calves are used, as they are only rarely affected with tubercle, but some difficulty is experienced from their great liability to diarrhœa and the derangement of general nutrition consequent thereon. On the sixth day the vaccine is taken and intimately mixed with an equal weight of glycerine and water by being passed three times between glass rollers. It is then distributed in the usual way on glass slides and in little tubes, which are finally sealed by having the ends dipped in a mixture of wax and paraffin. Strict attention to cleanliness is observed, and before any of the lymph is used the calf is always killed and examined to see that it is quite free from disease. In 1892, 93 per cent. of the vaccinations in Stockholm were made with animal vaccine.

SCHOOL BUILDINGS, &c.

It is well known how high education stands in both Norway and Sweden and how much other countries have yet to learn from them, especially in the system kown as *slöjd*, or practice in the use of tools. The national schools in Stockholm are built in a style which shows how fully the authorities have realised the requirements of hygiene as regards them. So palatial are some of them that one might almost be pardoned for harbouring the suspicion that the authorities had been a little too lavish in their expenditure on them. Some of the schools have baths for the children in the basement, and all have a large gymnasium attached, where carefully planned exercises, after the method invented by Dr. Ling, are gone through, exercises designed not only to develop the muscles generally, but also to correct any tendency to spinal curvature or flat-foot. The accompanying plan shows the arrangements in one of the new schools for 1300 scholars. It will be seen that all the class-rooms open directly on one side only out of a well-lighted spacious corridor.

FIG. 3.



The Kungsholm School.

An institution, which finds its nearest analogue in London in the Foundling Hospital, exists in Stockholm under the charge of Professor Medin, for the temporary housing of infants (chiefly those that are either illegitimate or have been abandoned by the parents), prior to their being drafted off when four months old to foster homes in the country. The foster parents bring up the children until they are fourteen years old, receiving in return a definite payment from the institution, which thereby maintains a supervision over them. The nursing of the infants while in the Barnhus, as it is called, is principally done by wet-nurses. The services of these are secured for eight months by the institution guaranteeing to look after the infant of the wet-nurse until it is fourteen years old, just as is done in the case of the others. The institution is one of the most interesting in Stockholm, and the general arrangements of the buildings are about as good as they could be.

No article on Christiania and Stockholm would be complete without some reference, however slight, to the systems in vogue for the control of the liquor traffic—namely, the Gothenburg system in Sweden and that known as Local Option in Norway,—which have been brought very prominently before the public in this country recently owing to the proposals of the Bishop of Chester as to licensing reform. Both aim at reducing the number of licences to the needs of the population by placing the monopoly of them in the hands of a company which must devote all profits over and above 5 per cent. interest on the capital invested, either to the relief of the rates, as in Sweden, or to charitable and philanthropic institutions dependent upon voluntary contributions, as in Norway. As far as impressions are worth anything it must be admitted that both Christiania and Stockholm appear models of propriety as compared with many seaport towns in Great Britain, France, and Holland. That drunkenness has been abolished no one would admit for a moment, but that it has been diminished is proved by statistics as to the consumption of alcohol per head and the number of admissions into hospital for alcoholism. In Gothenburg, for instance, the consumption of spirits has diminished from 28·9 litres per head in 1876 to 16·05 litres in 1889. During the same time the cases of delirium tremens treated in the hospitals had decreased 50 per cent. It used to be the custom in Stockholm to give every case of fracture admitted into the hospitals the stock mixture of bromide and chloral, but now only rarely has it to be given as a prophylactic against delirium tremens in such cases. Dr. Linroth, in the work referred to before, has tabulated the deaths from 1871–90 attributed to alcoholism, calling attention, however, to the difficulty there is in getting true returns as to this as a cause of death. He gives the following table:

	Death-rate.	Taking death-rate from 1871–75=100.
1871–75	0·39 per 1000	100
1876–80	0·15 ,, ...	40
1881–85	0·14 ,, ...	35
1886–90	0·12 ,, ...	30

It would be unfair, however, to attribute the diminution entirely to the systems, as the national sense that has been aroused as to the evils of the drink traffic must in itself have done much towards lessening the consumption.

THE ANTWERP UNIVERSAL EXHIBITION.

(FROM A SPECIAL CORRESPONDENT.)

(Continued from p. 97.)

THE FRENCH SECTION.

NATURALLY Belgium makes the best show in this Belgian International Exhibition, but the French section is not far behind that of Belgium itself. It has also acquired a reputation which confers upon it a graceful charm, for the French is known as the "ladies' section." Here are such wonderful exhibits of dresses, silks, and articles of toilette that ladies almost invariably give each other rendezvous in the French section. Unless, however, I seized this opportunity to indulge in a diatribe against tight-lacing there is not anything to say, from the hygienic point of view, concerning these toilette exhibits. The only remark I can make is that they are, one and all, unwholesome and, in many instances, opposed not only to laws of health and anatomy but also to the laws of art. Yet, notwithstanding these fundamental shortcomings, they often possess a charm, a piquancy, an original audacity—in a word, a *chic*—which explain why what is theoretically wrong is, in practice, so eagerly adopted and so "well worn." Of course, by the side of clothes we have a great display of French scents and perfumery. There is, also, much luxurious furniture in the French section that is of special interest to ladies; but the French department has other claims to notice besides being the ladies' favourite resort. Its metallurgic exhibits are very grand, as also that of its great glass works. The St. Gobain glass factory—apart from its ordinary products—shows how glass can be advantageously utilised for urinals, the floors and walls of closets, &c. To the hygienist the exhibits of the town of Paris will be of special interest, unless these have already been seen and studied at the Universal Exhibition

of 1889. At the Antwerp Exhibition three or four rooms are set apart for the town of Paris, and here I found excellent drawings of the sewers of the French capital, from the oldest days to the present epoch. There are plans and drawings of the sewage farm of Gennevillier and of the House of Detention of Nanterre, where in March, 1892, the first case of cholera in Western Europe occurred. Then there is a diagram showing that, whereas the sewers of Paris measured 26,051 metres in 1789, there were at the commencement of 1894 sewers to the length of 1,342,969 metres. One of the rooms contains plans, books &c. setting forth all that relates to the Paris water-supply. A smaller room has photographs of the leading hospitals, while another section is devoted to charitable institutions, with characteristic sketches of the dresses worn by various classes of paupers. There are many drawings concerning the inspection of meat and the preservation of bodies at the Morgue. The school department gives specimens of handicraft, art drawings, &c. In a word, systematically grouped together there is a very effective illustration of the work done by the Paris Municipal Council, which serves as an object-lesson in local administration. This exhibit does great credit to the town of Paris, and, now that there is a County Council for London, has not the time arrived when something similar might be organised to show what is done in the British metropolis? The municipal activity of English life remains altogether ignored and unrepresented at international exhibitions.

THE BELGIAN SECTION.

On entering the exhibition by the main entrance, under the central dome, the visitor is at once in the Belgian section, and slightly to the left some very fine models and dioramas of the Belgian coal mines and quarries will be seen. Among these the firm of Gustave Hanarte, Engineers, of Mons, and M. Fouquenberg of Wasmes exhibit machines for compressing air to be used in the ventilation of coal mines. But though this is so important and interesting a subject no explanation of these inventions is given. There are also many safety lamps shown, and other lamps by which it is said the amount of chokedamp present can be estimated, and here, again, there is nothing to denote their respective merits. On the walls there are drawings of bridges and submarine tunnels, notably those of the Cockerill Society and the Liège Water Company. Under the head *Génie Civil* other walls are covered with many large and interesting plans, photographs, and drawings of public works, notably pumps for raising drinking water. Then are reached public buildings, large and handsome *crèches*, notably the infant schools of Willebroeck. Unlike older establishments of this description, the rooms have broad window space and the closets are outside in small wings detached from the main building and have windows giving on to the outer air. There are wooden models of artisans' dwellings, and in one and all care is taken to keep the closets well away from the dwelling portion of the house. In the main avenue is an enormous trophy of metallic pipes manufactured by the Liège Water Company. A diagram explains that this company manufactures more pipes for water-supply than all the other manufacturers of Belgium put together and that the largest part of these pipes are exported. There are also in the Belgian section several exhibits of Belgian hardware pipes for drains, the syphons of closets, &c. Among these may be mentioned those of the Société Anonyme de Céramique, J. Mousen and Co. of Haine St. Pierre, and J. B. Crégorie of Bouffioulx. Their traps &c. are copies of English models. Messrs. W. H. Wright and Co., Sanitary Engineers, Brussels, however, exhibit, both in the Belgian and in the British sections, sanitary apparatus of British manufacture. They show, for instance, the Archer patent-jointed stoneware pipes by which the usual black sulphur and tar composition bands, used in joining drain pipes together, are no longer needed. The joints are made perfectly tight by running liquid cement into a groove at the time of laying the pipes. They also sell in Belgium the closets, pans, &c. made by Johnson Brothers, of the Trent Potteries at Hanley, and all the well-known models of "flush down" and "flush out" closets. It is very satisfactory to note that there is a good business done in Belgium in the sale of the most approved patterns of sanitary closets; but in this respect the Belgians are much more advanced than their neighbours the French. The Belgian Government has taken an active part in the exhibition, as also have the various local authorities. The Ministry of the Interior shows charts relating to the Belgian schools, and there are not only numerous specimens of the work done at school, but actually a class-room for domestic economy, with teachers and pupils hard at work. At one moment the girl pupils may be seen washing and ironing linen, at another they are learning cookery by preparing and cooking their own dinners. At other times they may be engaged in making dresses, and for recreation they are taken round the exhibition. Those who have personal experience of the poor of England know how great is the waste, and consequent want, with its attendant effects on health, due to ignorance of domestic economy. If this simple science could be more effectively taught in England much misery would be avoided. In this respect there are in the Belgian section small portable ovens for baking bread, so that every economic household may make its own bread.

THE CONGO.

While the Belgians thus encourage education and economy at home they are very anxious to develop their possessions abroad, and all that relates to the Congo holds a prominent place at the exhibition. In the very elaborate exhibits of the War Department, amid trophies of arms, specimens of modern artillery &c., are to be seen stretchers and ambulance waggons especially designed for the tropics. There are stretchers that weigh only eleven kilogrammes, with copper instead of iron fittings so as to avoid oxidation. The cloth used is light, strong, cleanly, and easy to work. What serves as a pillow can be filled with clothes, provisions, or with leaves or grass. There are no hooks, no buttons—nothing that can protrude and catch in the branches when going through the jungle. In the gardens there is a special pavilion devoted to Congo exhibits and there is also a Congo village inhabited by natives, which is one of the sensational attractions of the exhibition. In the Congo section there are M. Kalcher-Wiellman's bandages and surgical instruments for use in the tropics, and various exhibits of preserved provisions that explorers can take with them. Prominent among them are those of the English firm of Crosse and Blackwell. The Maison Pélécheid has tinned butter, with a medical certificate to the effect that the butter is pure and has been sterilised. Then there are some clothes for the Congo, which, on the whole, did not indicate that the manufacturers possessed any special knowledge of what was needed in the tropics. Nor is it easy to discern what particular connexion there is between Blandy's Madeira and the Congo; still the Madeira is exhibited in the Congo section, and everyone will recognise that it is very good Madeira. It may be remembered that this Madeira (Messrs. Blandy's wine) first came under the notice of the British public at the International Health Exhibition. The island of Madeira was then beginning to recover from the effects of the phylloxera. Close to the Congo Pavilion there is Humphreys' iron house and hospital. These light, portable, and yet strong dwellings are naturally of great interest to all who are concerned in colonial enterprise. One half of the iron house in question is fitted up as a hospital. Here there is a bed that can be easily folded and packed on the back of a mule, and Messrs. Gitten, Masquelier et Cie.'s surgical instruments.

(To be continued.)

NUISANCE AND WASTE.

THE official annual reports of the chief inspector of alkali and other chemical works are interesting and instructive, not only in showing to what extent the Alkali Works Regulation Act is effectual in suppressing nuisances, but also in indicating the improvements in manufacture and production, chiefly in regard to the utilisation of waste, the sanitary disposal of which legislation has urged on the attention of the manufacturer. Without this legislation it is probable that many processes of manufacture would have remained still imperfect and crude. Alkali waste, for example—consisting largely of the sulphides of lime, which readily evolve sulphuretted hydrogen on exposure to air—have for long constituted a source of serious nuisance in the neighbourhoods in which, as in many parts of Lancashire, veritable mountains of it exist. Anxious to render this waste mass free from objection, the manufacturer has at length been able by a combination of complex chemical processes to transmute it into free sulphur, and a by-product which

gives promise of possessing excellent qualities as a cement. The application, indeed, of the Chance-Claus process, to which we refer, is now so far advanced, according to the recent report of the inspector,[1] that already apparatus for treating the whole of the tank waste of St. Helens and of Widnes has been constructed. In all, about 35,000 tons of sulphur are thus produced annually when the whole of the apparatus is in action; and, in spite of the fact that at one of the larger alkali works more than 5,000,000 cubic feet of mixed air and sulphuretted hydrogen are expelled from the waste, complaints of nuisance arising from the escape of gas from this have ceased and no accident arising from its inhalation by workpeople has been reported during the year. In some instances, generally in small works, where no attempt at recovery is made, nuisance from alkali waste still exists but steps are being taken to abate this. It is interesting to note, too, that the former by-products of the old and original Leblanc process of soda-making, the disposal of which gave the manufacturers considerable trouble in order to avoid nuisance, have now actually saved the process from extinction by its powerful rival the ammonia-soda process. The by-products of the Leblanc process are hydrochloric acid, chlorine, and bleaching powder, all of which are now recovered economically in the process and sold at a remunerative price. It is therefore a matter of surprise, observes the alkali inspector, that the older process, which has flourished for more than a century, but seemed a short while ago to have received its deathblow, has during the last eighteen months shown such renewed vitality that during that time five new Leblanc works have been started, all of which are now in operation. The improvements which the products of white offensive fumes from cement kilns urgently call for have not yet reached a practical stage, although some more or less successful attempts have been made to burn the smoke and thus to diminish the fetid smell which is often prevalent, especially in those places where clay from river beds is used in the manufacture. No complaint has been brought during the past year against the manufacturers of sulphate of ammonia, the escape of the gas liable to be set free, sulphuretted hydrogen, by the action of sulphuric acid upon gas liquor being so far satisfactorily controlled that none outside the factory are aware that the manufacture exists. With regard to arsenic works the necessity for the adoption of some remedial measures has been shown by frequent litigation, which was instituted because of the alleged destruction of cattle through eating grass said to be poisoned by the arsenic freely distributed through the air from the chimneys up which it had been carried by the draught. A dry filter has been devised to meet the case and is found to be quite successful in arresting the arsenic completely, thus saving a certain amount of material that would otherwise be lost. Tar distillation gives rise to nuisance owing to the escape of gases from the condensers of the tar stills. The gases consist principally of sulphuretted hydrogen and a considerable amount of light hydrocarbon vapour which does not condense at the usual temperature of the still worms. From the inspector's point of view the continuous still is much to be preferred to the intermittent, since in the former there is no opening of vessels for the charging or discharging of material, and consequently the escape of gas and evil-smelling compounds is largely obviated. By such an arrangement, also, there is an obvious economy of fuel and heat, as cooling of the tar is avoided, and the wear and tear of the apparatus are considerably reduced by obviating the alternate cooling and heating of the still.

Zinc works have been brought under the Alkali Works Regulation Act with the view of suppressing the white vapour (oxide) which is discharged from the retorts used in roasting the sulphide. Several hundreds of these retorts are usually in operation at a time, and the result is the formation of a dense cloud which is carried by the wind for a considerable distance. The first attempt to overcome the difficulties of dealing with this objectionable vapour was to collect the fine dust by means of a projecting hood of sheet iron and to draw it away by means of a fan or by the chimney draught. This device has, however, given little satisfaction, but in the meantime further attempts are being made. Mr. Fletcher, the chief inspector, suggests, in regard to the treatment of dust-laden air (zinc, lead, and copper), the use of a dry filter composed of such materials as are best suited to the occasion. In the case of fumes of zinc, lead, copper, &c., light waste scrap iron, such as thin chippings, waste wire, &c., might answer.

It would appear from the report that, in some instances of works in which certain operations give rise to nuisances, the inspectors can do nothing because these works are not included in the Act. Thus, in the case of nickel works a complaint has lately been made of nuisance arising from a discharge of sulphuretted hydrogen, which is used in the process of manufacture to separate the metal from its solutions. Again, there is the manufacture of chloride of sulphur, for which chlorine gas is largely employed, and yet according to the present position of the Act the chlorine from a factory of this class may be allowed to escape, to the injury of the neighbourhood, and the inspector would be powerless to interfere. It is evident that the Act should not so much apply to particular branches of manufacture as to the prevention of the exit of noxious gases into the air from any factory whatever. All operations involving an escape of fumes or gases which are shown to be prejudicial to health should be brought under the operation of the Alkali Act in spite of the limitation of scope which is suggested by its title. In the meantime it is satisfactory to observe the considerable progress that has been made during the past year by inspectors appointed under the Act in bringing a very great number of new works into conformity with its requirements. We trust this vigour will be maintained and upheld by increased legislative facilities.

[1] Thirteenth Annual Report on Alkali &c. Works, by the Chief Inspector. Eyre and Spottiswoode. 1894.

CHOLERA.

THERE can be no longer any doubt that a very serious renewal or revitalisation of the cholera epidemic has manifested itself in Russia, and that the sanitary and municipal authorities of St. Petersburg have had their attention seriously aroused to the increasing gravity of the situation. There were 171 fresh cases of cholera and 50 deaths registered at St. Petersburg on the 13th inst., and there were at that date altogether 460 cases under treatment in the hospitals. A further increase took place on the following day, when the total number of fresh cases reported was 218, and the deaths 69, and on the 16th there were 196 fresh cases and 79 deaths. The outbreak is stated to be more severe than that of last year, the daily number of cases being greater and the mortality among those attacked higher. The disease is not confined to any one district, several cases having occurred in the infantry barracks and in the suburban districts of St. Petersburg. Moreover, cholera is said to be very prevalent at Cronstadt and to be present in the dockyard and arsenal of that place, and several ports in Finland are also stated to be infected. The first cases in the present outbreak are stated to have arisen at Cronstadt.

According to an official bulletin of the 14th inst., 875 cases of cholera and 294 deaths had occurred in St. Petersburg since the 8th inst., while at Cronstadt there were 57 cases and 15 deaths between the 8th and 13th inst. There were also 16 cases and 3 deaths reported at Warsaw during the first week of July. The following figures are given as to the reappearance of the disease in various governments this summer:—Between July 1st and July 7th, Warsaw, 33 cases and 21 deaths; Kyelets, 119 cases and 51 deaths; St. Petersburg, 26 cases and 10 deaths; Estland, 7 cases and 3 deaths; Kovno, between June 24th and July 7th, 187 cases and 46 deaths; Plotzk, between June 24th and June 30th, 66 cases and 33 deaths; Olonets, between July 4th and July 9th, 3 cases and 2 deaths.

The St. Petersburg Board of Health has posted notices in the streets recommending the measures to be taken by the population, and special precautions have been taken at the public departments, workshops, factories, and theatres. The railway officials have organised a sanitary inspection service, and along the St. Petersburg, Moscow and Warsaw lines ambulance carriages and hospital accommodation have been provided for any cholera cases that may occur.

According to intelligence from Berlin it would appear that several cases have occurred in some of the riparian towns and villages and among the raftsmen of the Vistula. The correspondent of the *Standard* telegraphs that cases have appeared in and near Dantzic and at Schidlitz and Neufahrwasser. From Vienna we learn that the Austrian Minister of the Interior has promulgated directions as to the increased sanitary supervision

which is to be exercised by the various sanitary authorities in consequence of the reappearance of cases of cholera in Russian Poland and in outlying districts of Galicia, where the disease has been spreading and has reached the town and district of Cracow. The Galician town of Zaleszczyski, in which numerous cases of cholera have appeared, has been officially declared an infective centre; it is situated on the Dniester close to the Russian frontier. The correspondent of the *Times* reports that active measures, in the way of sanitary supervision, provision of medical aid, hospitals and means of disinfection are being, or have already been, adopted in Austria and Hungary at the instigation of the respective Ministers of the Interior of those countries. The latest reports, according to the correspondent of the *Standard*, do not show that there is any great increase in the number of attacks in Galicia and Bukowina, but the epidemic is nevertheless said to be spreading in districts and communities hitherto free from it. The warm and moist weather of the present season has not only revived cholera in Russia and several contiguous countries, but the disease has appeared, as we have already reported, in Sweden, on the Hague, at Liège in Belgium, and has been present for some time past in Brittany, although we have heard very little about it. It will be remembered, however, that we heard little of the remarkable localisation and development of cholera in and around Paris in 1892, where the exact cause and origin of the disease was never satisfactorily accounted for, although cholera succeeded in getting a foothold there even prior to the advance of the epidemic coming from the East through Russia, and its subsequent extension to Hamburg.

Coincidently with this increased activity of the epidemic in Europe we learn from Vancouver, by steamers arriving there with the mails from China and Japan, that cholera is spreading with amazing rapidity throughout the Chinese empire. In addition to the present outbreak of plague in that country it is stated that there have been 40,000 deaths from cholera in Canton alone. The Chinese Government is, however, very reticent, and as there are no means of arriving at the full extent of the scourge it is very possible that these rumours are exaggerated expressions of the facts. From what we know of the filthy and insanitary conditions prevalent in China we may safely assume that the permanent local conditions of that country furnish a favourable environment to the cholera cause, and that epidemic outbreaks may be simply dependent on the presence or not of certain factors and on certain widely diffused influences.

There is a considerable amount of activity in India apparently in regard to hygienic regulations and provisions relating to cholera. The sanitary commissioner for the Punjab, Surgeon-Colonel Roe, has submitted a scheme by which the experience gained at the gatherings at Hurdwar may be utilised at other periodical fairs and big native gatherings. Among the points dwelt upon are the selection and apportioning off beforehand of the general site in sections or district camping grounds for the pilgrims coming from different parts of India, with a due regard to proper accommodation and the prevention of overcrowding; the provision of water-supply, latrine accommodation, and surface cleanliness; the erection of a general hospital and the setting apart of special hospital huts for choleraic disease; the provision of medical officers and medical aid; the inspection of pilgrim trains and the warning by telegraph of all district officers in the event of a fair being broken up by the outbreak of any epidemic sickness. M. Haffkine is energetically engaged in pushing forward his anti-choleraic inoculation method of prophylaxis with a certain measure of success so far as his experiments have extended up to the present time. In a country like India opportunities for testing the value of this method will not be wanting, but it is necessary to be very cautious in drawing conclusions prematurely from insufficient data. At the present time, however, Russia seems to afford as ample opportunities and facilities for a trial of M. Haffkine's method as India. During the week ending June 9th there were only 15 deaths from cholera registered at Calcutta, against 15 and 15 in the two preceding weeks, the number being somewhat lower than the average of the past quinquennium.

As regards our own country, the Local Government Board has issued a circular to the clerks of the sanitary authorities in England and Wales urging that the utmost vigilance shall be exercised to control any suspicious forms of illness; and, in view of facilitating action in this direction, the Board intimates that it would give favourable consideration to any applications to add diarrhœa to the list of notifiable diseases until the termination of the present quarter.

ANNUAL REPORT OF THE ST. JOHN AMBULANCE ASSOCIATION.

THE Central Executive Committee of the St. John Ambulance Association are to be congratulated upon issuing their report for 1892–3 so soon after their last report and in bringing their proceedings more up to date than has latterly been the case.

In the year which this report covers there has been an increase of over 2000 certificates issued on any previous year. The *dilettante* or drawing-room class has disappeared, and the more solid educational class has taken its place. Amongst policemen, firemen, and railway employés a knowledge of how to render first aid to the injured has been made obligatory and one of the necessary steps to promotion.

Comparing the report with that of 1890 we find that since that year seventeen new country centres have been formed, and six new foreign and colonial centres; whilst the increase in detached female classes has been 123, and in detached male classes 125. Much of this increase is due to the adoption of ambulance instruction by the technical education committees of the county councils.

The London School Board and the authorities of our large public schools do not give this matter of ambulance training the attention it deserves. Winchester, Harrow, and Rugby are all conspicuous by their absence and Eton is represented by only five students who have obtained certificates in the year.

This report contains an account of the excellent work done by the metropolitan corps of the St. John Ambulance Brigade, of whose excellent services the London public are fully aware. Colonel Thackeray, C.B., V.C., has been appointed commissioner of this brigade, and he adds a very satisfactory report of their work. At the opening of the Imperial Institute, and on the occasion of the marriage of their Royal Highnesses the Duke and Duchess of York, the unprecedented good service done by the metropolitan corps in the streets of London is therein stated. On the latter occasion over 1500 cases of illness and accidents were treated by the surgeons and ambulance attendants.

THE METHOD OF DESTROYING THE CARCASES OF DISEASED ANIMALS AT HAMBURG.

(FROM OUR SPECIAL CORRESPONDENT.)

PERSONS interested in the management of slaughter-houses know that the disposal of the carcases of condemned animals is a matter of great difficulty. There is always the fear that some of the unwholesome meat may be stolen and sold; and, in any case, the carcases themselves are cumbersome, rapidly decompose, and give rise to serious nuisance. At Hamburg, however, there is a destructor now in use which rapidly converts the carcases into valuable manure and this without occasioning any inconvenience. I am indebted to Police-Commissioner Früchtnicht for my knowledge of this important invention. With great courtesy the police commissioner conducted me to the destructor works, situated some distance outside Hamburg, and gave me all the necessary explanations. The machine consists of a large iron cylinder or drum. It is placed horizontally and a small two-horse-power engine makes the cylinder revolve. The cylinder is approached from above and there is an opening in the side through which the matter to be destroyed is introduced. When full the opening is closed tightly by bolt and nuts. In the centre of this plate opening there is a much smaller aperture, which is also firmly secured, but which can be opened so as to extract samples from time to time and thus determine whether the process is completed. All round the cylinder there is a steam jacket. A pressure of steam is produced equal to two or three atmospheres, though the cylinder has been tested for a pressure of six atmospheres. By plates obliquely placed within the cylinder the mass inside, as the destructor revolves, is thrown towards the centre. This facilitates the mixing during the operation and afterwards the emptying. These plates act as a funnel towards the aperture in voiding the apparatus, the

material falling out on the floor below the cylinder by the same opening which, when turned uppermost, serves for loading. The working capacity of the cylinder, which is the largest actually in use, is made for the treatment of about three tons of matter at each operation. At both extremities of the cylinder there are tubes which serve as inlet and outlet for steam &c. Once the cylinder is filled with the carcases &c. that have to be destroyed the material is first subjected for two and a half hours to the direct action of steam under pressure. Then the steam is closed off and only admitted into the steam jacket. The cylinder is made to revolve for five minutes after a pause of half an hour's duration, and this is repeated three or four times. When the fat has been fully dissolved and detached from the meat it is drawn out in a very simple but ingenious manner. Through one of the pipes water is introduced into the cylinder, and as it fills the lower portion the fat, in a heated and fluid state, rises to the top of the cylinder. Here the exit pipe, which is bent so as to act as a syphon, draws the fats off into an adjoining vat, where they are subjected to a process of clearing. This is achieved by means of a cold water douche, but this section of the work is not as yet fully organised and will be perfected shortly. The amount of fats obtained varies according to the material treated, and the proportion of fat drawn off is equal to from 83 to 90 per cent. of the whole. The water which has served to expel the fat from the cylinder is now got rid off by evaporation. For this purpose steam is admitted only into the surrounding steam jacket. This, the drying process, lasts from seven and a half to fourteen hours, according to the material treated. The odorous gases generated in the cylinder pass out by the syphon tube and go through a metallic spiral, where they are cooled and the water they contain condensed, the rest passing into the chimney. It is proposed to use this distilled water for the boilers. The material, when the process is completed, comes out as a dry brown powder. It is thrown on to a sieve and any large particles remaining, such as bits of bone, are returned to the destructor and go through the process a second time. On the day of my visit three tons of condemned anchovies were being thus converted into manure. A few days previously twenty-three pigs had been destroyed in one single operation. Owing, however, to the large amount of fat in pigs and varying component parts of different animals it has been found expedient whenever possible to mix the several materials and thus secure a more uniform manure.

Formerly the destruction of condemned carcases cost the city of Hamburg a considerable sum of money. With the aid of the destructor just described this loss has been converted into a profit amounting in one year to 10,000 marks, from which, however, must be deducted the salary of the superintendent and the cost of the buildings. The destructor is known as the Podewils patent, and is manufactured by L. A. Riedinger at Augsburg. The manure sells in the market for from twelve to thirteen marks the hundred kilogrammes and the fat for from forty to forty-three marks the kilogramme. The latter is used for the manufacture of the better qualities of soap. The dried manure produced by the destruction of the carcases contains from 5·6 to 7·2 per cent. of nitrogen and from 5·7 to 0·8 per cent. of phosphoric acid. On one occasion the proportion of phosphoric acid was as much as 12·9 per cent., but this was due to the destruction of a large quantity of salted pork that had arrived from America. It should also be noted that the property in the neighbourhood of the destructor has greatly improved, as all bad odours have been practically eliminated. The town is now constructing special carts made of iron, which can be securely locked, to bring carcases from the slaughter-house or from the town to the destructor. As a rule, free incisions are made in condemned meat and it is sprinkled with petroleum. Being very volatile, the petroleum renders the meat uneatable. It is proposed now, however, to use crude carbolic acid. The fæcal matter from the intestines of the horses, cows, &c. is gathered and dried in a room where the walls and floor are carefully cemented, and, when dry, it is used as manure. By the side of the destructor there is a shed where the larger animals are cut up into pieces small enough to pass through the aperture of the cylinder. Two more cylinders have been ordered of a larger size and with apertures large enough to admit a quarter of an ox without cutting it up. There is also to be a special apparatus, a digester, for the destruction of animals that have died from anthrax. These will be destroyed without being cut to pieces or touched. Then there is also a project for so laying the floor of the knacker's shed that all the blood and refuse may be drained and sucked up and delivered directly inside the cylinder of the destructor. It only remains to add that the *poudrette* manure produced is altogether devoid of unpleasant odour and is of undoubted commercial value. The odour at the destructor works is somewhat similar to that of heating glue, but a few yards outside the building it can scarcely be noticed. Taking all these results into consideration the town of Hamburg deserves considerable praise for being in the vanguard among the towns of Europe in respect to this important detail of municipal administration. Nowhere have I seen the difficult question of dealing with the carcases of diseased animals and with condemned fish and meat more satisfactorily solved.

UNITED HOSPITALS' ATHLETIC SPORTS.

THE annual inter-hospital competition for the Challenge Shield took place on Saturday, July 14th, on the grounds of the London Athletic Club at Stamford Bridge. The weather was unfortunately showery, and this, no doubt, accounted for the attendance being smaller than in previous years, although there was no lack of enthusiasm. The preliminary heats had been run off on the previous Wednesday, and there was a good programme of events for competition. St. Bartholomew's Hospital created somewhat of a surprise by beating Guy's Hospital by six points to five, thus regaining possession of the shield, a result largely due to the efforts of C. V. Cornish. During the afternoon three hospital records were lowered in the Half-mile, Three Miles, and Hurdles. A new feature in the afternoon's events was a Five Miles Bicycle Race for members of the newly formed Hospitals' Bicycling Club.

It had been hoped that it would have been possible to arrange a match with the Yale University athletes during their stay in England, but owing to their being unable to remain longer in this country the contest had to be reluctantly abandoned, to the great disappointment of all concerned. The medals were distributed by Mrs. Victor Horsley. Messrs. A. F. Voelcker, M.D. (University College, London), G. R. Turner, F.R.C.S. (St. George's), and A. A. Bowlby, F.R.C.S. (St. Bartholomew's), acted as judges, and Mr. P. R. Lowe (Guy's) acted as secretary.

Appended are the results:—

100 yards, Final heat: H. T. Bell (Guy's). Time, 10⅘ sec. Half-mile Challenge Cup: A. Hay (St. Bartholomew's), 1; S. Mason (St. Bartholomew's), 2. Time, 2 min. 1⅘ sec. Putting the Shot: F. W. Bennett (St. Bartholomew's), 34 ft. 5 in. 120 yards Hurdle Race: J. Johnston (St. Bartholomew's), 16⅖ sec. 220 yards: C. V. Cornish (St. Bartholomew's). Time, 23⅘ sec. Five Miles Bicycle Race: A. Woods (Guy's), 1; H. J. Millbank Smith (Guy's), 2. Time, 15 min. 24⅘ sec. High Jump: S. F. Smith (St. Bartholomew's). Height, 5 ft. 6⅘ in. Throwing the Hammer: E. N. Scott (Guy's). Distance, 85 ft. 1 in. One Mile Challenge Cup: H. A. Munro (Guy's), 1; R. C. Leaming (St. Mary's), 2. Time, 4 min. 35⅖ sec. Long Jump: H. T. Bell (Guy's), 20 ft. 7 in. Quarter-mile Challenge Cup: C. V. Cornish (St. Bartholomew's). Time, 52⅖ sec. Three Miles Challenge Cup: H. A. Munro (Guy's). Time, 15 min. 16 sec.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY MEETING of the Council was held on the 12th inst., the President, Mr. J. W. Hulke, F.R.S., in the chair.

The President reported the result of the election for three members of Council on the 5th inst., and Mr. Howard Marsh, Mr. Reginald Harrison, and Mr. James Hardie were introduced, and made a declaration in the terms of the oath prescribed by the Charter of 1800, and took their seats as members of the Council.

The Committee on By-laws presented a fifth report, in which they recommend to the Council that the fee to be paid for the Licence in Dental Surgery should be increased from ten to twenty guineas, but that all persons duly registered as dental students on or before Oct. 1st, 1894, shall be enabled to obtain the licence at the present fee of ten guineas. The report was approved and adopted. The Council then proceeded to elect the professors and lecturers for the ensuing year, and the following appointments were made:—

Professors of Surgery and Pathology, Mr. C. B. Lockwood

and Mr. Joseph Griffiths; Professor of Comparative Anatomy and Physiology, Mr. Charles Stewart; Lecturer on Anatomy and Physiology (Arris and Gale), Mr. W. G. Spencer; and Erasmus Wilson Lecturer, Mr. J. H. Targett.

The Regulations of the Council, section 24, relating to the meetings of Members as prepared by the President and Vice-Presidents in pursuance of the resolution of the Council on the 14th ult., were approved and adopted.

The consideration of the proceedings at the half-yearly meetings of Fellows on the 5th inst., was postponed.

As announced in our last issue, Mr. J. Whitaker Hulke was re-elected President, and Mr. Reginald Harrison, and Mr. Alfred Willett were elected Vice-Presidents for the ensuing year.

Mr. J. H. Targett was reappointed Pathological Curator.

THE LONDON COUNTY COUNCIL.

CONFERENCE BETWEEN THE PUBLIC HEALTH COMMITTEE OF THE COUNCIL AND REPRESENTATIVES OF VARIOUS COUNTY COUNCILS AND SANITARY AUTHORITIES.

ON Thursday last, at the County Hall, Spring Gardens, there was opened a most important meeting, over which Sir John Hutton, Chairman of the London County Council, presided, and one which may result in considerable modification in our risks from a notorious method of spread of infection. The London County Council has summoned to a conference with its public health committee representatives of those county councils whose interest in sanitary affairs has impelled them to appoint a medical officer of health for their counties, and has asked them to consider what means, if any, can be adopted to prevent the spread of infectious diseases by vagrants. The subject is one of imminent interest, and has for some time been receiving the earnest attention of medical officers of health. The medical officer of health for Newcastle has recently presented a report to the council of that city detailing many points bearing upon the matter, and in reports to the London County Council last year on the prevalence of small-pox their medical officer pointed to the spread of the disease by vagrants.

The following points have been set down for discussion, and though the lines thus suggested will inevitably be left in more than one direction, they show the practical nature of the questions which the assembled sanitarians propose to answer: 1. The compulsory notification by a vagrant when leaving a casual ward or common lodging-house of his destination. 2. His compulsory detention when exposed to a dangerous infectious disease. 3. His compulsory vaccination. 4. The disinfection of his clothes. 5. The regulation and supervision of common shelters not subject to the laws relating to common lodging-houses.

The first point to which the conference devoted its attention was the consideration of the proposal that common shelters which are not subject to the law relating to common lodging-houses should be made subject to law. This was carried unanimously.

The next business was a motion by Dr. Seaton, which was seconded by Dr. Armstrong, that in times of prevalence of infectious disease there should be a medical examination of all persons entering common lodging-houses and casual wards. The discussion excited a considerable amount of interest in the conference. Various amendments were moved. One speaker proposed that the common lodging-houses should be exempt from this examination on the ground that it was impracticable, and another speaker wanted to know what authority could undertake the task of examining, as in London, millions of casuals. Various suggestions on this point were submitted. The difficulty was got over by Mr. Beachcroft's proposal, which was carried without any dissentient voice, to make the resolution read that "there should be power to the local authorities to require medical examination of all persons entering common lodging-houses and casual wards."

Dr. Armstrong moved that on admission each inmate should be allowed the luxury of a bath of clean water. He mentioned a case where twelve persons had bathed in water in which two small-pox vagrants had performed their ablutions. The conference decided that cleanliness being necessary also during the intervening period the luxury in question should not be limited to times of epidemics.

One of the suggestions set down for discussion proposed that powers should be given to the local authority to call upon the keepers of common lodging-houses or shelters to refuse fresh admissions, and another suggestion was to the effect that the local authority should be empowered to cause such buildings to be shut. In the case of the Drury-lane lodging-house the council refused to admit fresh cases, but they did not actually close it or send away cases actually in the building at the time of the outbreak. This plan was effective in stopping the epidemic, and the cost entailed upon the ratepayers by the County Council's action was probably recouped over and over again by the saving of life in preventing the spread of the disease among the population of London. In the case of private houses, however, it was proposed that the owners should be recouped in some way, and this, it may be remarked, was in accordance with a resolution recently passed by the Incorporated Society of the Medical Officers of Health empowering sanitary authorities to compensate in case of expenses incurred under the Public Health Acts. This power is also given to authorities under the Public Health Act. If the Council's plan were adopted, the local authority would supply some sort of certificate on which it would be stated that on a certain day a particular house was in a sanitary condition. Dr. Niven did not think much advantage would be obtained from this suggestion, if lodging-houses other than common lodging-houses were not included in the suggestion. The whole powers implied in the suggestion seemed to be already embodied in the by-laws of the Public Health Act. The suggestion, "that the local authority should have power to order the keeper of a common lodging-house, in which there has been infectious disease, to refuse fresh admissions for such time as may be required by the authority," was ultimately adopted by the conference.

At the afternoon sitting the question of the detention of vagrants exposed to infection by local authorities was discussed, and the conference adopted a resolution in favour of the proceeding. The questions of vagrancy tickets and of the vaccination of tramps were also discussed, but no resolutions were passed.

THE CHELSEA HOSPITAL FOR WOMEN.

WE have received from the Secretary of the Chelsea Hospital for Women a copy of the report rendered by the committee of inquiry appointed by the house-committee to investigate the statements made by Dr. Louis Parkes relative to the sanitary condition and mortality statistics of the hospital. These statements were contained in an official report presented by Dr. Parkes, their medical officer of health and public analyst, to the Chelsea Vestry, on Feb. 6th of this year, and will be found enumerated in THE LANCET of Feb. 10th. As a result of Dr. Parkes's report, a committee of inquiry, consisting of Lord Balfour of Burleigh, Lord Sandhurst, Sir Charles Wentworth Dilke, Dr. (now Sir) John Williams, Mr. H. G. Howse, F.R.C.S., and Mr. J. H. Brass, was appointed by the hospital authorities, and the result of their action is now before us. The report deals with Dr. Parkes's statements under two heads: (1) the general sanitary state of the hospital; and (2) the mortality statistics of the patients in the hospital with special regard to the deaths among the inmates upon whom surgical operations had been performed. Under the first head the committee of inquiry find Dr. Louis Parkes to have been practically justified in his course. In their opinion it was clearly his plain duty to call the attention of the hospital authorities to the matter, and in the event of their refusing prompt attention to make a formal appeal to the vestry. The committee do not, however, understand why Dr. Parkes recommended that notice should be served under the Public Health (London) Act upon the hospital authorities at a time when the hospital was, and had been for three weeks, empty of patients. Under the second head the committee of inquiry also arrive at findings whose net result is distinctly adverse to the hospital and its staff. They consider the death-rate high under several operative heads. The occurrence of septicæmia they point out not to have been general and prevalent in the practice of all the staff, a fact which has at any rate a favourable bearing upon the sanitary state of the building. They find the administration of the hospital generally to leave much to be desired. The committee of management in their opinion do not meet sufficiently frequently, and the house-committee was very

scantily attended. The medical record of the cases they consider to have been kept in a completely satisfactory manner.

It is obvious that the result of this report must be some decisive action on the part of the hospital authorities. An unimpeachable practical committee of inquiry have found that the hospital in more than one important direction sadly wants setting in order, and as officers responsible to the public for the good management of an institution supported by the public, the authorities must take early steps to effect this end.

A meeting of the board of management of the hospital, under the presidency of the Earl of Cadogan, K.G., was held on Wednesday last to consider the report; and a special general meeting of the governors is convened for an early date with the same view.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Diphtheria in the Hinckley Urban and Rural Districts, by Dr. S. W. WHEATON.[1]—Dr. Wheaton's report deals in much detail with all the circumstances of a prevalence of diphtheria which appeared at first sight at least to be complicated with antecedent measles and diphtheria, and which presented many points of etiological interest. The town of Hinckley is first described. Apart from its water-supply, which is good, nearly every sanitary circumstance was found to be faulty. Imperfect sewers, a defective condition of sewerage as a whole, deposits of sewer contents, foul effluvia from sewer ventilators, and in some old parts of the town bad house drainage were revealed as the result of inquiry; a damp soil rendered more damp by overflows from rain-tanks, damp house walls, a soil sodden with filth by reason of leakage from drains, and stagnant water on the ground surface were conditions which affected a large number of houses; in short, the old part of the town and some of the newer parts presented health conditions of a most imperfect character. In February, 1893, there was a death from diphtheria; then there was a cessation, but between Sept. 14th and Nov. 30th the year's death-roll from that disease was made up to twenty-eight, and it became evident that the attacks had numbered between two and three hundred. In 1892 there had been much measles, and the disease had been marked by a septic exudation on the fauces and throat which was regarded as of a diphtheritic nature. No paralytic symptoms had, however, ensued. Then followed 178 attacks of scarlet fever, but these were not especially identified with throat symptoms. There were, however, a few fatal cases in which malignant throat affections ensued, and in one case a death was registered as due to scarlet fever and diphtheria. The septic sore-throats during the measles outbreak in 1892 seemed to have been associated with local sanitary defects, but the epidemic of diphtheria in the autumn and closing months of 1893 was scattered almost indiscriminately over the whole town. Owing to the somewhat widely prevailing view as to the relation of sewer and drain emanations to diphtheria Dr. Wheaton, after eliminating a number of conditions, such as water, milk-supply, &c., dealt somewhat in detail with this subject, and he made personal investigation into seventy-six of the diphtheria attacks. In three invaded houses only did he find any untrapped drain terminating in the dwelling; and he states that in the majority of cases where diphtheria had occurred the house drains were in good condition and efficiently trapped. So also the disease was not especially prevalent where the sewer defects were most marked, and there were special instances, such as the workhouse, where the drains communicated with one of the faulty sewers, where they were themselves defective, and where they were additionally fouled by being made to receive a deposit of privy contents, and where, nevertheless, no case of diphtheria occurred. Whatever, therefore, the influence of the notably faulty sewer and drain conditions in Hinckley, Dr. Wheaton concludes that they did not constitute the vehicle by means of which the infection of diphtheria was conveyed, and he arrives at the conclusion that the disease was probably related, in so far as its origin was concerned, with those throat affections which had antecedently prevailed amongst the measles patients and amongst some of the scarlet fever patients or that it was newly brought into the town. Of the cases investigated 89 per cent. were amongst children of fourteen years or under and the disease was entirely confined to the working classes; in short, it was practically limited to those who, by reason both of social status and of age, were attending the elementary public schools. Inquiry into school attendances as a means for diffusion of the infection showed, amongst other things, that, out of forty-four children who were the first to be attacked, in their respective families no less than forty-three were in attendance at one or other of the elementary schools. No special sanitary defects were discovered at these schools; but it is now well known that, quite apart from these, schools have a tendency to intensify the infective quality of diphtheria which amply accounts for the diffusion of the disease. We have only touched on one part of the extremely interesting investigation made by Dr. Wheaton. The report deals with other points and takes in the question of diphtheria in the rural district also. It merits and will repay careful perusal.

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis and Co., Dublin. 6d.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Salford Urban Sanitary District.—The infantile mortality in Salford for 1893 was higher than for some years past, being 211 per 1000 registered births. The excess is in large part to be accounted for by the high death-rate from infantile diarrhœa. The death-rate among illegitimate children was no less than 397 per 1000 births. Out of a total of 4895 deaths in the district 162 were uncertified either by a medical practitioner or a coroner. As regards infectious disease, 49·4 per cent. of those cases notified were isolated—a percentage which shows a decided increase on years subsequent to 1887. There were two outbursts of typhoid fever in the district in the months of September and November. In the case of both these outbreaks several defects in drains were discovered, and Mr. Paget is inclined to think that the drains acted as agents of dissemination by virtue of the fact that the prolonged drought precluded the efficient flushing of the drains and sewers. Mr. Paget trusts that with the introduction of the Thirlmere water greater flushing facilities will be obtained. In reference to smoke nuisances thirty-nine firms were reported, but, owing to the inferior coal which the prolonged coal strike necessitated the consumption of, prosecutions were for the time being suspended. Mr. Paget's report contains several spot maps, and also one showing the result of the sanitary survey of Salford, and setting forth by aid of different colours the mean quinquennial death-rate obtaining in each enumeration district: this map should have great local value. The waters of the Manchester Ship Canal were, Mr. Paget tells us, peculiarly offensive during the summer months to those parts of the borough situated within half a mile of it, and he expresses a hope that the efforts of the joint board for the Rivers Mersey and Irwell will succeed in reducing the serious pollution of the waters feeding the Ship Canal. Mr. Paget goes on to observe: "The existence of an enormous water-way through the borough of Salford, navigable for ocean-going vessels, may be of material commercial benefit to the community; but the protection of this water-way from such pollutions as may give rise to emanations productive of a general lowering of health in its immediate neighbourhood is of no less importance to the welfare of the borough."

Blackpool Urban Sanitary District.—Mr. Jasper Anderson remarks with regard to the infantile mortality in Blackpool during 1893 that the dry, hot summer of the year in question brought about a high mortality, the rate being 192·8 per 1000 births. The mortality was most marked during the third quarter of the year, and Mr. Anderson thinks that the excess is connected with the overcrowding and maternal neglect produced by the influx of visitors. The death-rate among illegitimate children was no less than 314·6 per 1000 births—in other words, as Mr. Anderson observes, an illegitimate child has but half the probability of reaching the age of twelve months as one born in wedlock. A table is also given in the report before us showing ages in months of the infants who died during the first year of life, and from this it appears that, out of a total of 123 deaths, no less than 29 died before attaining the age of one month. In regard to infectious disease, an important point has been gained by the

operation of Section 87 of the Blackpool Improvements Act, 1892, which enacts that the phrase "without proper lodging or accommodation," which occurs in Section 124 of the Public Health Act, 1875, shall be extended so as to embrace danger of infection to other persons in the same house. This extension should certainly be of great value in cases where resort is made to legal proceedings. Measles is notifiable in Blackpool, and Mr. Anderson, while admitting that there are difficulties in notifying the disease, is nevertheless impressed with the importance of continuing to embrace it within the operations of the Act.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5926 births and 3180 deaths were registered during the week ending July 14th. The annual rate of mortality in these towns, which had been 15·5 and 16·1 per 1000 in the preceding two weeks, declined again to 15·9 last week. In London the rate was 16·3 per 1000, while it averaged 15·6 in the thirty-two provincial towns. The lowest rates in these towns were 9·5 in Derby, 10·2 in Cardiff, 11·1 in Huddersfield, 11·3 in Plymouth, and 11·8 in Halifax; the highest rates were 18·3 in Preston, 19·7 in Birkenhead, 21·1 in Sunderland, 22·0 in Salford, and 22·4 in Liverpool. The 3180 deaths included 497 which were referred to the principal zymotic diseases, against 433 and 476 in the preceding two weeks; of these, 176 resulted from diarrhœa, 114 from measles, 75 from whooping-cough, 62 from diphtheria, 45 from scarlet fever, 20 from "fever" (principally enteric), and 5 from small-pox. No fatal case of any of these diseases occurred last week in Derby; in the other towns they caused the lowest death-rates in Bolton, Plymouth, and Gateshead, and the highest rates in Croydon, Salford, Preston, and Sunderland. The greatest mortality from measles occurred in Salford, West Ham, Croydon, and Sunderland; from scarlet fever in Wolverhampton and Salford; from whooping-cough in Huddersfield, Sunderland, Preston, and Croydon; from diarrhœa in Leicester, Norwich, Salford, and Preston. The mortality from "fever" showed no marked excess in any of the large towns. The 62 deaths from diphtheria included 45 in London, 2 in Bristol, and 2 in Liverpool. Two fatal case of small-pox were registered in London, and 1 each in Birmingham, Manchester, and Oldham, but not one in any other of the thirty-three large towns. There were 97 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 14th inst., against 170, 132, and 109 at the end of the preceding three weeks; 17 new cases were admitted during the week, against 21, 16, and 28 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2143, against 2153, 2087, and 2099 on the preceding three Saturdays; 277 new cases were admitted during the week, against 233 and 266 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 152 and 162 in the preceding two weeks, were 158 last week, and were 39 below the corrected average. The causes of 55, or 1·7 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Oldham, Leeds, Sunderland, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Bristol, Leicester, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16·9 and 15·9 per 1000 in the preceding two weeks, further declined to 15·4 during the week ending July 14th, and was 0·5 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·6 in Leith and 12·0 in Perth to 16·7 in Greenock and 19·0 in Dundee. The 440 deaths in these towns included 22 which were referred to diarrhœa, 13 to measles, 6 to scarlet fever, 5 to diphtheria, 5 to whooping-cough, 3 to "fever," and 2 to small-pox. In all, 56 deaths resulted from these principal zymotic diseases, against 61 and 55 in the preceding two weeks. These 56 deaths were equal to an annual rate of 2·0 per 1000, which was 0·5 below the mean rate last week from the same diseases in the thirty-three large English towns. The 22 fatal cases of diarrhœa showed a marked increase upon the numbers recorded in recent weeks, and included 8 in Glasgow and 5 in Edinburgh. The deaths referred to measles, which had been 8 and 7 in the preceding two weeks, rose again to 13 last week, of which 8 occurred in Glasgow and 5 in Dundee. The fatal cases of scarlet fever, which had been 10 and 9 in the preceding two weeks, further declined to 6 last week, and included 4 in Glasgow. The 5 deaths from diphtheria also showed a slight further decline from the number recorded in recent weeks, and included 2 in Glasgow and 2 in Edinburgh. The fatal cases of whooping-cough, which had been 20 and 14 in the preceding two weeks, further fell to 5 last week. Of the 2 deaths from small-pox, 1 occurred in Edinburgh and 1 in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 81 and 57 in the preceding two weeks, were 61 last week, and were 16 below the number in the corresponding period of last year. The causes of 30, or nearly 7 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined from 24·6 to 17·6 per 1000 in the preceding four weeks, rose again to 18·0 during the week ending July 14th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·4 per 1000, against 17·4 in London and 17·1 in Edinburgh. The 121 deaths registered in Dublin during the week under notice exceeded by 3 the number in the previous week, and included 6 which were referred to the principal zymotic diseases, against 10 and 5 in the preceding two weeks; of these, 3 resulted from whooping-cough, 2 from "fever," and 1 from diarrhœa, but not one from small-pox, measles, scarlet fever, or diphtheria. These 6 deaths were equal to an annual rate of 0·9 per 1000, the zymotic death-rate during the same period being 3·0 in London and 2·1 in Edinburgh. The fatal cases of whooping-cough, which had declined from 7 to 1 in the preceding four weeks, rose again to 3 last week. The 121 deaths in Dublin last week included 20 of infants under one year of age, and 33 of persons aged upwards of sixty years; the deaths of infants corresponded with those in the preceding week, while those of elderly persons showed a further increase upon the numbers returned in recent weeks. Two inquest cases and 3 deaths from violence were registered; and 40, or nearly a third, of the deaths occurred in public institutions. The causes of 19, or nearly 16 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL FAWCETT has been transferred from Warley to Woolwich, and Surgeon-Major Wolseley to Warley. Surgeon-Captain Garner has been transferred from the Western to the South-Eastern District. Surgeon-Major Day has joined the Home District for temporary duty, and Surgeon-Captain Salmon has been posted to the Western District. Surgeon-Major Cusack has been granted leave from India.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant T. H. Foulkes is appointed to perform, in addition to his military duties, the duties of Civil Surgeon, Tiddim, Northern Chin Hills. Surgeon-Lieutenant-Colonel W. E. Johnson, M.D., has delivered over, and Surgeon-Lieutenant-Colonel A. F. Dobson, M.B., has assumed charge of the office of the Residency Surgeon at Bangalore. Brigade-Surgeon-Lieutenant-Colonel G. Bainbridge, M.D., and Surgeon-Captain H. C. L. Arnim, I.M.S., have respectively delivered over and received charge of the office of Deputy Sanitary Commissioner, Sind Registration District. — *Volunteer Corps:* Moulmein Volunteer Rifle Corps: Surgeon-Captain George Tucker Thomas (Surgeon-Major, I.M.S., to be Surgeon-Major). North-Western Railway Volunteer Rifles: Surgeon-Major William Coates, I.M.S., to be Surgeon-Major,

to complete the establishment. The following Volunteer medical officers are appointed Surgeon-Lieutenant-Colonels:—Rangoon Port Defence Volunteers: Surgeon-Lieutenant Oswald Baker (Surgeon-Lieutenant-Colonel, I.M.S). Rangoon Volunteer Rifle Corps: Surgeon-Major Hugh Johnstone (Surgeon-Lieutenant-Colonel I.M.S.). Hyderabad Volunteer Rifle Corps: Surgeon-Captain Edward Lawrie (Surgeon-Lieutenant-Colonel, I.M.S.). Baluchistan Volunteer Rifle Corps: Surgeon-Lieutenant William Rice Edwards (Surgeon-Captain, I.M.S.), to be Surgeon-Captain.

YEOMANRY CAVALRY.

A memorandum in the *London Gazette* states that Her Majesty has approved of the disbandment of the 2nd West York (the Prince of Wales's Own) Yeomanry Cavalry. Amongst the list of officers whose resignations have been accepted is the name of Surgeon-Major E. W. Symes, M.D., with permission to retain his rank, and to continue to wear the uniform of the corps on his retirement.

VOLUNTEER BEARER COMPANIES.

Every year improvements may be noticed in the Volunteer force and this effort to raise departments must be of great value if it is accompanied by a corresponding issue of medical and surgical equipment. An important departure from the original method of formation has recently been sanctioned by the War Office with reference to the bearer companies of Volunteer Infantry Brigades. In the Welsh Border and East London Brigades the bearer company has always been formed on the strength of one battalion, a plan which has been found to work exceedingly well, the *personnel* being entirely at the disposal of the medical officers and wearing the same uniform—namely, that of the Army Medical Staff Corps with the authorised exceptions. In other brigades matters are far different, the *personnel* of the bearer company has been drawn from several units, each contributing from ten to fifteen men, and, in many cases, a great want of uniformity exists consequent upon the difference in uniforms, also upon the fact that captains of companies will not always spare their men for ambulance work, especially when taken away from their battalions. The plan which has succeeded so well in the Welsh Border and East London Brigades is now authorised for all Volunteer Infantry Brigades, no increase of establishment is permitted, so that the company must be formed on the strength of a battalion which is not up to establishment. The conditions of efficiency have been modified so that the bearer company is not required to do musketry; the training of regimental stretcher bearers will continue as before. It is interesting to note that in the Portsmouth Brigade the new plan has already been adopted, and it now possesses a bearer company on the strength of the 1st Volunteer Battalion, the Hampshire Regiment.

THE HEALTH OF THE BRITISH SOLDIER IN INDIA.

The *Saturday Review* of the 14th inst. has a very good article on this subject. Our contemporary remarks that a government which annually tabulates the deaths of some seven millions of its subjects, which watches with paternal interest over the physical well-being of nearly 70,000 British and 127,000 native soldiers, and whose officials are in charge of a gaol population of more than 100,000, has naturally a good deal to say on hygienic topics. As regards the country at large matters are still in a rudimentary stage, but as regards its two armies the Government of India has effected improvements which have had substantial results. As far as the natives are concerned there are two overmastering difficulties—want of funds, and an absence of the faintest belief in sanitation on the part of 250 millions of people who have not the slightest intention of altering their traditional habits at the instance of any superior authority. As regards the European troops the Royal Commission of 1863 reported that the death-rate had for some years averaged 69 per 1000, and it was thought that it might be reduced to 20, or even ultimately 10 per 1000. The former standard has been fully reached, and the latter nearly so, for in 1883 the death-rate was only 10·8 per 1000; but of late years the results, as our readers are aware, have not been so encouraging. The ravages of cholera, so far as British troops are concerned, have been greatly reduced; but enteric fever shows no signs of diminution—quite the reverse, in fact. Our contemporary calls special attention, however, to the formidable increase in one class of disease among European soldiers in India, and considers this increase attributable in a great measure to the removal of precautions in deference to agitation in this country on the subject. That venereal diseases prevail to a terrible extent among the European troops in India, and that these constitute a most serious source of inefficiency, does not admit of any doubt. The *Saturday Review* points to the experience of the Calcutta garrison in 1873 in proof that, by proper precautions and without any authenticated grievance, this class of disease can be brought within the narrowest limits and its graver forms be practically obliterated.

INDIAN MEDICAL SERVICE DINNER.

As we have already intimated, the proposal to establish an Indian Medical Service dinner in India was carried into effect on the 13th ult., when twenty-one officers dined together at the United Service Club, Simla, under the presidency of Surgeon-Major-General Rice, C.S.I. This was the first annual gathering of the kind, and scarcely sufficient time elapsed between the origin of the idea and its realisation for the subject to become known and to enable members of the service stationed at a distance to be present, but having been once established there is every reason to hope and believe that the attendance will in future be much larger. The officers present were: Surgeon-Major-General Rice, C.S.I., Surgeon-Colonel Raye, Brigade-Surgeon-Lieutenant-Colonel Franklin, Surgeon-Lieutenant-Colonels Roe and Warden, Surgeon-Majors Lewtas, Bate, Moorhead, Faulkener, Dennys, O'Dwyer, Sedgefield, and Cunningham, Surgeon-Captains Leslie, Dyson, Ker, Drake-Brockman, and James, Surgeon-Lieutenants Earle, Green, and McLeod. In the course of his speech, Surgeon-Major-General Rice expressed a hope that the dinner would prove to be the inauguration of a yearly recurring event, and added that, if he might use the phrase, they were enjoying a period of profound peace in the Indian Medical Service; the rumours of impending changes—if not of actual dissolution—of the service of which so much was heard a year or two ago had altogether vanished; and never during the thirty-eight years that he had been connected with it had the Indian Medical Service acquired such a measure of stability as it enjoys at the present moment.

It is stated in the Anglo-Indian papers that the Shropshire Light Infantry Regiment now stationed at Hong Kong is, according to present arrangements, due at Calcutta next trooping season. The epidemic of plague at Hong Kong will, in all probability, have altogether disappeared before next winter, but should any sanitary objections arise against the transfer of the Shropshire battalion from Hong Kong to India the *Pioneer* suggests that the Rifle Brigade might be temporarily detained at Fort William. It will be remembered that an officer and several men of the Shropshire Light Infantry were attacked with the disease at Hong Kong, and that in the case of the officer the attack soon proved fatal. Three hundred men of this corps very nobly volunteered to render sanitary aid to the plague-stricken districts in Hong Kong.

The Indian trooping service during the coming season, says the *Broad Arrow*, will be carried out by one only of the regular Indian troopships, the *Malabar;* the *Crocodile*, *Euphrates*, *Serapis*, and *Jumna* having been finally condemned. The *Britannia* and the *Rome*, of the P. and O. Company's fleet, and the *Dilwarre*, of the British India S.N. Company's fleet, have been chartered by the Government. The Indian trooping service will in future be conducted from Southampton instead of Portsmouth, and this year's first departure will take place early in September.

FEVER AT MALTA.

A good deal of attention has been excited lately by the increased prevalence of sickness among the officers and men of the Navy, which is alleged to be attributable to the insanitary condition of the Malta harbour. That part of the harbour known as the dockyard creek, in which several vessels were anchored, has been especially referred to as a very insalubrious site. It has, however, been stated in both Houses of Parliament that there is no reason to suppose that the prevalence of sickness is due to the insanitary state of the harbour.

The prize competition for stretcher squad of the West London Volunteer Brigade will take place on July 21st at the Headquarters of the 20th Middlesex Artists Rifle Volunteers, Duke's-road, Euston-road, London, commencing at 7.30 P.M., under the presidency of Brigade-Surgeon-Lieutenant-Colonel Parson-Smith. A challenge bowl and several other prizes will be competed for.

The challenge shield and badges of the Volunteer Medical Association will be competed for at Wellington Barracks on Saturday, July 28th at 4 P.M.

The session of the Army Medical School will terminate on the 30th inst.

Correspondence.

"Audi alteram partem."

"SOME COMMON SOURCES OF ERROR IN TESTING FOR SUGAR IN THE URINE."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Pavy's question in THE LANCET of July 14th I beg to say that my observations have been made exclusively on the urine of the human subject; I know nothing of the urine of the lower animals. If, as Dr. Pavy asserts, "osazone crystals are obtainable with the greatest facility from healthy urine" I can only conclude that the phenyl-hydrazine test must for some reason be difficult to apply and uncertain in its results. In no other way can I account for the fact that, not only am I unable by means of that test to find evidence of sugar in normal urine, but skilful chemists and careful clinical observers assure me that they have obtained negative results with the test. As to the question, Does sugar exist in normal urine? Dr. Halliburton says:[1] "The answer has been sought by many observers, a large number of whom assert that sugar is, and a nearly equal number of whom state that it is not, present," and he refers to a formidable array of authorities, mostly German, on both sides of the question.

Obviously, then, the question is not one to be answered hastily or easily. While I am doubtful as to the existence of any sugar in normal urine, I am absolutely certain that the amount must be infinitesimal and that for all practical purposes it may be entirely disregarded. The chief facts upon which this very confident opinion is based are the following. 1. The total reduction of picric into picramic acid, with the resulting depth of red colour, by normal urine is fully accounted for by the amount of kreatinine calculated to be present. 2. After separation of the kreatinine by the mercuric chloride process, described in my paper—a process which has been proved not to remove or to destroy any glucose that may be present,—the picric acid test gives not the slightest indication of any reducing agent. The delicacy of picric acid as a test is shown by the fact that it gives a distinct indication of glucose in an aqueous solution containing $\frac{1}{20}$ gr. in an ounce of the liquid.

And now, having replied to Dr. Pavy's inquiry, I beg permission to put a question to him. The question is: Does Dr. Pavy still maintain, as he did in his paper in the sixty-third volume of the Transactions of the Royal Medical and Chirurgical Society, that, while one-fourth of the reducing action of normal urine upon cupric oxide is accounted for by uric acid, the remainder of the reduction, which would be equivalent to at least half a grain of glucose per ounce, is "due to the small amount of sugar naturally present in urine," and, further, "it is doubtful if there is any other body worthy of consideration to exert any sensible reducing effect"? It will be interesting to know whether recent researches have in any degree modified the opinion expressed in the latter part of the preceding statement.

I am, Sirs, yours faithfully.

Savile-row, July 16th, 1894. GEORGE JOHNSON.

P.S.—May I be permitted to rectify an oversight in footnote 7 of my paper in THE LANCET of July 7th? $\overline{3}\,\frac{1}{2} = 480$ m. should be $\overline{3}\,\frac{1}{2} = 240$ m.

"CASE OF CONGENITAL SYPHILIS; INFECTION OF THE MOTHER BY HER OWN CHILD."

To the Editors of THE LANCET.

SIRS,—All the criticism on my case has followed on the lines I foreshadowed in my paper. I cannot, however, agree that either Mr. Cotterell or Dr. George Ogilvie has adduced any argument sufficiently strong to negative my views regarding it. Mr. Cotterell, in his letter of June 16th, takes the weakness of the evidence regarding the infection of the father and previous children as sufficient to dispose of the congenital origin of the disease in the baby. I have already, however, given my reasons for retaining it in spite of this weakness. Mr. Cotterell again states that apparently my inability to find evidence of a primary sore is my only reason for rejecting the acquired origin of the disease; but such is far from being the case, although in the few instances of acquired infantile syphilis that have come under my notice there has in every one been no difficulty in fixing the site of such sore both from the mother's observations and the presence or traces of it in the patient. Lastly, I consider the vaccination theory put forward by Mr. Cotterell has nothing to support it, and my experience of acquired infantile syphilis would lead me to place no particular significance on the times he selects to prove it. With Dr. George Ogilvie I agree that too much stress may be laid upon the presence or absence of taint in former children. His objections to my interpretation of the case are harder to meet than those of Mr. Cotterell. Of course it is impossible for me to prove, or even attempt to prove, that the snuffles and rash of a period prior to my seeing the patient were due to inherited syphilis; but in an infant presenting every symptom of the inherited complaint, my assumption that similar symptoms in earlier infancy were ascribable to the same complaint seems to me a natural and allowable one, and one that would occur to every observer. With regard to the possibility of differentiating between the symptoms of acquired and inherited syphilis in infancy, my experience clashes with that of Dr. Ogilvie. In this direction I would briefly quote from Dr. Radcliffe Crocker: "Acquired syphilis in children or infants presents much the same symptoms and runs much the same course as in the adult." Agreeing as I do with Dr. Crocker, there is to me a strong dissimilarity in the clinical pictures presented by the two complaints. The experience, however, of everyone in the acquired syphilis of infancy is perforce a limited one, and I may have been too dogmatic in some of my assertions. At the same time, whilst I can conceive some of the inherited cases presenting features akin to those occurring in acquired ones, I cannot believe that the symptoms of acquired syphilis could so closely mimic those peculiar to the inherited form as occurred in my case. To Dr. Ogilvie's erudition I am indebted for the knowledge that there are accepted exceptions to Colles' law. Had I retained any doubt as to the correct interpretation of the phenomena in the case at issue this fact would have dispelled it, although Dr. Ogilvie would deny me the poor consolation of believing my case at best a doubtful one.

Since publishing my case I have heard of two others of a similar nature; but the fear of offending against the "orthodox" has deterred the observers from recording them. With the removal of such fear it may be found that the exceptions to Colles' law are more numerous than is at present imagined. I am, Sirs, yours faithfully,

Upper Berkeley-street, July 9th, 1894. J. A. COUTTS.

"LARYNGEAL MOTOR ANOMALIES."

To the Editors of THE LANCET.

SIRS,—Dr. Cagney, in his answer to my letter in THE LANCET of June 23rd, says that he fails to see that the "experiments on animals under ether, to which I referred in my letter, have any bearing upon the question at issue." Is he not a little inconsistent in basing his entire theory upon other experiments of Mr. Horsley's and my own, also performed upon animals under ether, and in implicitly accepting such of our results as suit his theory, whilst belittling those which do not? I of course cannot help it if he is led into this position by failing to grasp the broad fact that a difference exists in the biology of the abductors and adductors, even when they are wholly separated from the central nervous system. But under such circumstances it is obviously no use prolonging this discussion. In conclusion, I have only to correct one error of statement on the part of Dr. Cagney. The experiments on the vagus to which he refers did *not* fail, as the perusal of the original will show. They indicate that in *addition* to that nerve there exist other afferent paths, not that the abductor tonus is automatic.

I am, Sirs, yours faithfully,

FELIX SEMON.

Wimpole-street, Cavendish-square, W., July 12th, 1894.

[1] Text-book of Chemical Physiology and Pathology, p. 755.

"THE LOSS OF LIFE FROM PREVENTABLE DISEASE."

To the Editors of THE LANCET.

SIRS,—Dr. Lee will pardon me if I point out—since the fault may be my own—that he has failed to grasp the full purport of my letter. I do not consider, nor did I state, "that the *two main* obstacles to a satisfactory result from the notification of whooping-cough would be the difficulty of arranging hospital nursing and accommodation for the young sufferers." Dr. Lee's letter is likely to furnish the erroneous inference that I do not recognise the importance of taking the preventive measure of home isolation *in those cases where it can be effected*. The amount of preventable mortality from measles and whooping-cough is a matter which every health officer deplores; the difficulty is to find a means of reducing it. For the many reasons which I gave, and which I could multiply, I think that so far as compulsory notification is concerned better results at a less cost would follow from the plan which I suggested.

I am, Sirs, yours faithfully,

Adelaide-road, N.W., July 14th, 1894. HENRY R. KENWOOD.

THE USE OF CINNAMON IN THE TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—During the last three years I have undertaken a series of experiments with the view of ascertaining the value, if any, of different spices in the treatment of cancer. I now, however, only wish to allude to the results that have been obtained with cinnamon; and, while carefully guarding myself from saying anything at present that would suggest that cinnamon should be regarded as a so-called specific in cancer, I yet feel justified, after a considerable experience of its use, in drawing the attention of the profession to its value as a treatment in this disease. That there are distinct limits within which only beneficial results may be expected I quite admit, and that outside these limits it is probably hopeless to attempt to improve the patient's condition; but within these limits I have invariably found that where pain was present it ceased, that fetor disappeared, that the general health invariably improved, and in some cases that improvement continued for considerable periods. And speaking as to these limits I would say generally that an ulcerating mass exposed to the air that surgeons would refuse to operate upon would probably not yield good results from treatment, although in one case of cancer of the tongue and left faucial pillar, in which the patient suffered intense pain, the pain entirely subsided within five days after the commencement of treatment, and the patient, after a residence of four months in Ancoats Hospital, was sent to the convalescent hospital at Bowden much improved in health. But unquestionably the best results have, on the whole, been obtained where the tumour was cut off from the air by being situated either in the stomach, the rectum, the uterus, or the mamma where the superjacent skin and covering of the nipple were intact. It would be absolutely impossible, within the space that you could be expected to allow me, to give a detailed account of every case that has been treated during the past three years, but I hope I may have some other opportunity of making these public. At present I can do no more than briefly draw attention to some of the results of the treatment on the striking and salient symptom—pain.

CASE 1.—A male aged fifty-three in comfortable circumstances. Cancer of the stomach. First noticed indigestion and pain in August, 1891; weight at that time, 14 st. My first visit, Nov. 30th, 1891; patient weighed 11 st. 7 lb.; symptoms: severe pain over region of the pylorus, only stilled by daily use of morphia; copious vomiting, which gradually became of daily occurrence, and recurred frequently each day, assuming on Dec. 16th a coffee-grounds appearance; stools also became black and tarry. Cinnamon treatment commenced Jan. 6th, 1892; on Jan. 11th, 1892, pain had subsided and was not complained of afterwards.

CASE 2.—A female aged fifty-two. Cancer of the breast. Was placed under my care by Dr. Sinclair at the Southern Hospital, Manchester, on April 7th, 1892. Tumour large, of stone-like hardness; nipple retracted; glands in the axilla enlarged; pain of the usual character. April 22nd: My notes say, "Pain in great measure abated." May 25th: I find in my notes, "Suffers no pain."

CASE 3.—A male, suffering from cancer of the left side of tongue and left anterior faucial pillar, was placed under my care by Dr. Milligan of the Manchester Hospital for Diseases of the Ear and Throat, on Aug. 26th, 1892. This patient, at the time he came under my care, was suffering so severely from pain that it was with the greatest difficulty he could swallow even the softest food. Sept. 2nd, 1892: I find in my notes under this date, "Pain has entirely subsided."

CASE 4.—A patient aged thirty-two. Cancer of the perineum and rectum. Was transferred to one of my beds at Ancoats Hospital by my colleague, Mr Stanmore Bishop, on Jan. 8th, 1893. At this time this patient was suffering from a good deal of pain, which necessitated the use of three morphia suppositories daily. After Jan. 8th, 1893, on the morning of which day treatment was commenced, morphia was discontinued, and was not required any more during the whole of the year 1893.

CASE 5.—A female aged fifty-six. Cancer of uterus. Was placed under my care at the Southern Hospital outpatient room by Dr. Sinclair on March 7th, 1892. The notes of the case, which I copied at the time from the hospital note-book, were as follows: "Constant and severe pain in the hypogastrium; partial obstruction of the bowels; suffers occasionally from difficulty in micturition. Uterus a fixed indefinite mass; no discharge. Diagnosis: Cancer of the body. Treatment: Morphia." March 21st, 1892, I find stated in my notes under this date: "Patient has taken no morphia since March 8th, 1892."

Other cases might be added, but these already quoted are sufficient, I think, to justify me in claiming for cinnamon a distinct value in the treatment of cancer. I would very willingly have deferred the publication of this letter till other investigations, on which I am still engaged, had enabled me to speak perhaps on some other points as well as the control of pain in cancer; but though I thought that I had observed the most rigid reserve concerning the work on which I am engaged, quite recently, I know not how, the matter has suddenly passed out of my control, and I almost daily receive letters from complete strangers in different parts of England imploring me to help some despairing sufferer. Such letters are so distressing, and they place me in a position so intolerable in every respect that I feel compelled in my own defence to publish the results of my experiments as far as they go, though the work itself is not as complete as I could have wished. The line of reasoning that induced me to adopt the treatment I have followed need not at present be dwelt on. I will merely add that the preparation of cinnamon I have employed is a strong decoction made by taking one pound of Ceylon sticks and boiling slowly in a closed vessel for eight hours in three pints of water till the water is reduced to one pint; pour off without straining; shake up the sediment before taking each dose; patient to drink half a pint every twenty-four hours, the half-pint to be divided into such doses as best suit the patient. The decoction appears in most cases to agree best when taken soon after food.

I am, Sirs, yours truly,

J. CARNE ROSS, M.D. Edin.,

July 16th, 1894. Physician to Ancoats Hospital, Manchester.

"ANGIO-NEUROTIC ŒDEMA."

To the Editors of THE LANCET.

SIRS,—In the communication from Dr. Ramsay Smith published in THE LANCET of July 14th on the subject of angio-neurotic œdema, I find that he there refers to a former article of his in the April number of the *Practitioner*, in which he describes the condition as hitherto unnoted. As I have for some years past observed and collected cases illustrating this disease, may I be allowed to refer Dr. Smith to a paper by Dr. Ernest Wills and myself published in the autumn number of *Brain* last year having the same title and describing what I take to be a similar condition? If Dr. Ramsay Smith will turn to this paper he will find that the subject of angio-neurosis or vaso-motor ataxia, far from being unnoted, has received a good deal of attention from Continental and American observers, and he will also find that many of his own observations and conclusions have been confirmed.

I am, Sirs, yours faithfully,

DUDLEY COOPER.

London County Lunatic Asylum, Claybury, July 17th, 1894.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Mr. Hardie's Election to the Council of the College of Surgeons.

HOWEVER much it may be regretted that there were not seats on the Council of the College for all the candidates at the recent election, and notwithstanding the disappointment of the friends of Mr. Davies-Colley and Mr. Page, Manchester may be forgiven for rejoicing most heartily at Mr. Hardie's success. It is believed by his friends here that his thoughtful weighing of questions and calm judgment will prove sufficient warrant for their efforts on his behalf, and that ere long he will be known as a worthy successor to Mr. Lund.

Free Libraries.

The free library movement has been warmly taken up in Manchester. The Central Reference Library occupies a substantial and commodious building that served as the town-hall until the present municipal palace took its place, while branches are to be found in all the districts of the city. A few weeks ago a branch library, costing about £4000, was opened in Gorton—one of the townships recently added to the city—by the chairman of the libraries' committee. In the course of his remarks he said that more than 240 years ago Humphrey Chetham left £30 to provide "good and sound books" for Gorton. They were, however, to be chained to the desk that they might not be taken away. Last year 1,400,000 books were issued from the free libraries and the losses did not reach the value of £5. On Saturday week an important branch library was opened at Openshaw, another of the recently added townships; but here, in addition to the free library and reading-rooms, there are magnificent baths, a large public hall, class-rooms for technical and other instruction, together with a coffee tavern, with billiard and smoking-rooms, the whole forming a very fine pile of buildings. The total cost of these has been about £15,000. The whole of this, however, has not come out of the rates. The baths were given about five years since by the legatees of the late Sir Joseph Whitworth, and they have also given the adjoining site, valued at £2500, for the library and its additions, and £6000 towards the erection of the buildings. The most interesting, however, of the public libraries of Manchester is that at the Chetham College, one of the few venerable buildings left to the city. In his address on the opening of the Openshaw Library, Professor Ward, the principal of the Owens College, said: "There is not a scholar in this part of the country but cherishes towards the Chetham Library that kind of reverent affection which historical, local, and personal associations combine to evoke." Within its quaint and old-world precincts it is easy to forget for a time the feverish hurry and the crowded streets of a busy commercial centre. The magnificent Althorp collection acquired by Mrs. Rylands, and it is said greatly augmented by her, has been presented to the city, and will soon be placed in the beautiful building which is now, by her munificence, being erected for its reception. The Students' Library at the Owens College was recently presented with a valuable historical collection by the legatees of Sir Joseph Whitworth, and will soon be housed in a building provided by the generosity of Mr. R. C. Christie, who was for a long period chancellor of the diocese. The Medical Society of Manchester also possesses a collection second to few medical libraries in the kingdom, and this also is at present sheltered by the hospitality of the authorities of the Owens College.

Awards for Bravery.

Courage and skill are appreciated and honoured by none more than by members of the medical profession, and the following incident, which excited great interest in Manchester, may therefore perhaps be deemed not unworthy of record. The Lord Mayor the other day presented medals from the Watch Committee and from the proprietors of the *Quiver* magazine, together with £20 each, to two firemen who had with great bravery and by a most difficult as well as dangerous feat saved a man who was on the roof of a warehouse on fire. The top of the fire escape—seventy feet high—was three feet below the gutter of the roof. One of the men (Clayton) so placed his arm that the other (Lawrence) stood on it, and was thus able to raise himself on to the roof, from which he in some way succeeded in lowering the man he rescued to his colleague, and eventually all three reached the ground in safety. It is easy to see how strength, skill, and coolness would be needed, and how hand, brain, and stout heart would have to work together to accomplish this noble deed. In connexion with this subject it is satisfactory to know that ambulance work in the police force is not a mere name. At the last meeting of the Council a letter was read with reference to the rescue of a boy from drowning. Two policemen not only got him out of a canal lock, but also successfully carried on artificial respiration until his recovery was assured.

Infectious Diseases.

Small-pox happily shows a considerable diminution. In his last weekly report Dr. Niven says that 11 new cases had occurred as compared with 26 in the preceding week. Scarlet fever and enteric fever show some increase, the notified cases of the former having risen from 39 to 45.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday Fund.

A NEW system of distribution of this fund was unanimously adopted at a meeting of the board of delegates held on the 13th inst. The total receipts this year amount to £12,127 1*s.* 9*d.*, which, with a balance of £719 0*s.* 8*d.* from last year and the proceeds of some entertainments, will leave, after deducting £500 for expenses, £12,255 for distribution. By the liberality of Mr. J. C. Holder this has been made up to £12 500. It was stated that twenty-one years ago the effect of the distribution was to give to the General and Queen's Hospitals 64 per cent. of the entire proceeds of the Fund. Last year these institutions received 42 per cent. only. To divide £10,000 among the charitable hospitals it was stated that three principles of guidance were acted upon as correctives, which were the needs of each institution, whence did it draw its patients, and to what extent was it a provident institution. The various hospitals and institutions were then named with the respective proportions proposed, and the scheme as enumerated was accepted by the meeting.

Improper Advertising.

The vendors of a certain food have evoked the righteous criticism of some correspondents in the daily press by the manner in which their trade is carried on. Women dressed in uniform accompany the vehicle containing the article to be sold and apply from door to door for purchasers. The name of the originator of the "food" is the same as that of two of the General Hospital staff, consequently in the eyes of the ignorant and unlearned some confusion is likely to arise and wrong impressions be formed. Mistakes of this kind generally right themselves by the effluxion of time, but the aid of public criticism renders valuable help in the process.

A Question of Contract.

An important action of this nature was heard in the county court on the 16th inst. before Sir Richard Harrington. Mr. E. T. Burton, a medical man, sued Mr. Richard Beeston for two guineas for failing to call him in to attend his wife during her confinement. His Honour held that there was no evidence that Mrs. Beeston had her husband's authority to contract with Mr. Burton, and therefore the plaintiff must be non-suited. It is a commonly believed opinion that contracts of this kind are recoverable if not fulfilled; though it was stated that this patient took her husband's card to the medical man at the time she engaged him to attend, this was not held to be sufficient evidence. A written order by the husband will in the future probably carry more weight, but will entail an unknown amount of inconvenience and annoyance.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Accident to Dr. Anderson of Seaton Delaval.

DR. ANDERSON of Seaton Delaval, accompanied by his groom, had driven to Blyth, and was returning to his residence, when the horse shied, and the vehicle was overturned, the two occupants being thrown heavily into the

roadway. Dr. Anderson sustained a badly fractured arm, and his groom, who fell heavily on his skull, was stunned, considerable time elapsing before he recovered consciousness. Dr. Anderson, who is widely known in the district, was conveyed to his residence. It is stated that both sufferers are progressing as favourably as can be expected.

The Boylston Medal.

Dr. Norman Walker, who for some time practised in Dalston, Cumberland, has been awarded by the University of Harvard the Boylston Medal this year for an essay on cancer of the skin. The medal is awarded annually for the best essay on any subject connected with anatomy, physiology, or pathology.

Death of Dr. Wm. Turnbull of Newcastle.

I regret to note the death of Dr. Wm. Turnbull of this city, which took place at his residence on the 12th inst. Dr. Turnbull was a graduate of the University of Durham, and was in his thirty-sixth year. He had been in bad health for some time from abdominal disease, but his death was quite sudden and a shock to his friends. Dr. Turnbull was a visiting surgeon to the Convalescent Home at Whitley, and a medical officer in the Northumberland Volunteer Artillery. His remains were followed to the grave by many of his companions-in-arms and professional friends and patients.

Newcastle-on-Tyne, July 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Victoria Hospital for Consumption, Edinburgh.

THIS hospital is the first in Scotland devoted entirely to the treatment of consumption and diseases of the chest. The scheme which had as its final aim the establishment of such a hospital was launched in 1887 as the Victoria Dispensary, but the directors have had steadily in view the necessity for a hospital where cases could be thoroughly treated and carefully nursed. They have realised their aim so far that a house has been leased for a term of years at Craigleith, within two miles of the city, and will be ready to receive patients in the course of a few days. The house is admirably situated for the purpose and will provide accommodation for fifteen patients. The grounds extend to over seven acres and are well adapted to afford shelter and recreation for the patients. As to the necessity for such a hospital, no one who knows what phthisis is amongst the poor of a city like Edinburgh has any doubt; but last year's report brings this out very forcibly, for since the opening of the dispensary in 1887 patients to the number of 3468 have been seen and treated. Not only are patients seen at the dispensary by the honorary physician, Dr. Philip, but there is an assistant medical officer who visits patients at their homes. There is also a Samaritan Society doing benevolent work in visiting the patients and providing clothing and other necessaries for their comfort. The directors aim at much greater hospital accommodation than the present building provides, and in such a good work they must be wished all success; while they are to be congratulated on having shown an example to Scotland in this matter, which Glasgow is following and other towns will no doubt follow in time.

The Edinburgh School of Medicine.

Amongst the members of the Edinburgh Extra-mural School of Medicine there has long been a feeling of dissatisfaction at the want of status on the part of the school from its not being a corporate body, and different schemes have been proposed to obviate this drawback; but hitherto none of these has received much support. At present a movement is in progress to have the school brought into closer relations with the two Royal Colleges.

The End of the Summer Session.

The medical classes all terminate this week, and as soon as the examinations are over many men will leave town.

July 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Sir Patrick Dun's Hospital, Dublin.

AN important meeting of the friends and supporters of this hospital was held last week and was presided over by Sir John Banks, K.C.B., Regius Professor of Medicine, University of Dublin. The meeting was held to consider a proposal to hold a bazaar and *fête* next year in aid of the funds of the hospital. The chief income of the institution is from landed property and, in consequence of the land agitation, it has suffered a loss of fully £1000 yearly. In order to recoup the hospital some of the income the meeting was held to consider whether it would be advisable to hold a bazaar. The Masonic orphans' bazaar brought in a profit of over £21,000, the City of Dublin Hospital bazaar a profit of £12,005, while the *fête* held last year on behalf of Jervis-street Hospital, it is believed, produced several thousand pounds profit, but the accounts of the latter institution have not yet been published. A resolution was proposed by Dr. W. G. Smith, President of the Royal College of Physicians, and passed unanimously, to the effect that a bazaar be held next spring at Ball's Bridge and that a preliminary committee be appointed to further this object.

The Outbreak of Glanders at Cork.

Glanders has broken out among horses belonging to a Mr. Fitzgerald in Cork. The local authority have taken prompt measures; sixteen horses indicated by the mallein test to be infected have been slaughtered. Eleven were shot on the following day at the stables in Copley-street, and next day five were destroyed on Mr. Fitzgerald's farm at Ballyphehane. On post-mortem examinations being made it was found that every carcase save one showed indications of the presence of glanders.

Loughgall Dispensary.

At a meeting of the Loughgall Dispensary committee held on July 11th, Dr. Tate and Dr. Fergus were each proposed as candidates, and on a vote being taken each received an equal number of votes just as had occurred on the former meeting. As in the previous election it was decided to allow matters to stand as if no election had taken place, and Dr. Deane and Dr. Jones were proposed anew and the former was elected.

Close of the Summer Medical Session.

The summer session at the Belfast Hospitals and College came to a conclusion last week.

July 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

In Memoriam.

ON the 7th inst. the Medico-Psychological Society unveiled at the Salpêtrière Hospital the busts of two distinguished alienists—Baillarger and Jean-Pierre Fabret. The busts (both of marble) are placed in the centre of the principal courtyard of the hospital. That of Baillarger is due to the chisel of Malherbe, and bears the following inscription: "A Baillarger, 1809-1890, la Société Médico-Psychologique, ses amis—ses élèves." The lineaments of Fabret have been reproduced by Ludovic Durand, and the simple inscription engraved on it is as follows: "J. P. Fabret, 1794-1870." Under the shadow of a large tent erected for the occasion speeches were delivered in the presence of the Prefect of the Seine and other notabilities by the eminent alienists Drs. Jules Fabret (son of Jean Pierre Fabret), Ritti (secretary of the Medico-Psychological Society), Magnan (representing the Academy of Medicine), Mottet, and Bouchereau. The Bicêtre Asylum band discoursed appropriate music and a banquet closed the proceedings.

A New Asylum.

While on the subject of asylums I may mention that the Council-General of the Seine has approved the project of constructing a new establishment for the insane at Ville d'Evrard. Accommodation will be provided for 1200 patients, and the expense of construction and installation will reach 4,200,000 francs. This looks as if insanity were decidedly on the increase here as in England.

The Lungs of a Hospital.

What student does not remember the beaming looks of delight with which the hospital convalescent receives the welcome announcement that he may spend an hour or two daily in "the park"? Happy the hospital that can boast of a patch of green sward within its precincts. On Sunday last I found my way into the *old* Hôtel Dieu, now utilised for typhus fever patients. (Twelve cases are now under treatment there by Dr. Roger.) The wing facing the river

is occupied by the convalescents, but a solitary tree is the only bit of verdure visible in the courtyard. The authorities are, however, becoming more alive to the importance of an oasis in hospital grounds. Thus the Municipal Council of Paris has just voted the sum of 5000 francs towards the laying-out of a garden (square, as it is called here) in the grounds of the Trousseau (Children's) Hospital. The poor little patients will not complain of this addition to the premises.

Some Ancient Theses for the Degree of M.D. Paris.

M. Jules Roger, in his interesting book, "Médecins, Chirurgiens, et Barbiers," gives the following list of subjects of theses sustained in old times before this faculty:—1572. La nécessité de la mort est-elle innée? 1576. Le fœtus, ressemble-t-il plus à la mère qu'au père? 1589. L'air est-il plus nécessaire que la nourriture et la boisson? 1622. L'eau est-elle plus salutaire que le vin? 1639. Doit-on saigner une jeune fille folle d'amour? 1643. S'enivrer une fois par mois est-il salutaire? 1646. La femme est-elle un ouvrage imparfait de la nature? 1662. Le libertinage amène-t-il la calvitie? 1668. Les Parisiens sont-ils sujets à la toux quand souffle le vent du nord? 1714. Quel est le plus salutaire, de l'eau pure, du vin pur, ou du vin mélangé d'eau? 1745. Les littérateurs doivent-ils se marier? The *naïveté* of the preceding questions is charming, but he must have been a courageous man who, even in 1646, could gravely ask the question, "Is woman an imperfect work of nature?"

Appointment of Dr. Paul Berger to the Chair of Clinical Surgery.

Dr. Paul Berger has been appointed to the chair of Clinical Surgery vacant through the death of Professor Léon Lefort. The new Professor is well-known in the British colony as the surgeon of the Hertford British Hospital—the very admirably fitted institution at Levallois-Perret, founded by the late Sir Richard Wallace, and now supported entirely by Lady Wallace. I heartily congratulate Dr. Berger on his newly acquired honours. A visit to his wards at the Tenon Hospital (close to the Gare du Nord) will well repay the trouble, and convince visitors of the wisdom of the choice made by the Faculty of this distinguished surgeon as the occupant of the Chair of Clinical Surgery.

July 17th.

Obituary.

WILLIAM JOHN LITTLE, M.D. BEROL., F.R.C.P. LOND.

THE career of Dr. Little, who was born in 1810, affords a remarkable instance of how a misfortune may become from various causes almost a blessing. Never a very strong child, he suffered from various infantile maladies, during convalescence from which an attack of infantile atrophic paralysis left him with most of the anterior muscles of the left leg permanently palsied. This affection, while it prevented him from taking part in most of the sports of youth, no doubt largely determined his choice in favour of a profession that does not necessarily require great strength and activity, while it was certainly the cause of his turning his attention to that branch of surgery in which in after life he so distinguished himself, and with which his name will always be connected. At the age of ten years he was sent to school at St. Margaret's, near Dover, where, among other acquirements, he was so well grounded in the French language that when three years later he was sent to the celebrated college of St. Omer, in France, he was able to gain a prize for French composition, a feat that no Englishman had before achieved. To this period of his life Dr. Little always referred with pleasure, and he ever remembered the kindness and consideration shown to him by his Jesuit teachers, who, devout Catholics though they were, did not consider it part of their duty to disturb the Protestantism of their lame pupil. Returning to England at the age of sixteen, he was apprenticed to an apothecary in the vicinity of his birthplace in the East of London, where, like Japhet in search of a father, he was introduced to the "rudiments" of pharmacy, most of the pharmaceutical preparations of that day being prepared from the crude drugs on the premises. Having acquired what he always considered a valuable knowledge of practical pharmacy, at the age of eighteen he obtained the surrender of his indentures and entered as a student at the London Hospital, where, as early as 1828, Mr. Andrews was teaching the importance of a generous diet in cases of severe injury, instead of the antiphlogistic regimen then in vogue. Those were "the good old days," when superannuation was unknown, and the nonagenarian Sir William Blizard was still one of the active surgical staff. After holding the post of resident dresser for six months he became clinical clerk to the late Dr. Billing, and the connexion thus begun ripened into the warm friendship that continued until the end of Dr. Billing's long life. Having completed the necessary studies Dr. Little, in 1831, became a Licentiate of the Apothecaries' Company, and in the year following was admitted a Member of the Royal College of Surgeons. He subsequently attended the lectures of the celebrated Hodgkin at Guy's Hospital on Morbid Anatomy, and studied Comparative Anatomy and Physiology under Professor Grant at University College, thus fitting himself for the appointment which he obtained, in 1836, of Lecturer on Comparative Anatomy and Physiology in the London Hospital Medical School.

Dr. Little began practice in Billiter-street, and was soon afterwards selected by Dr. Cobb to accompany him to Newcastle for the purpose of studying Asiatic cholera on its first appearance in this country. He found the practical knowledge thus obtained of substantial value in subsequent epidemics. He soon gave up the intention of practising as a surgeon, however, after unsuccessfully contesting a vacancy for assistant surgeon at the London Hospital, and determined to graduate in medicine in order to fit himself for the post of physician to the London Hospital should a vacancy occur. The Royal College of Physicians at that time required of all candidates for its licence a two years' residence and graduation at a university. He therefore set out in 1834 for Berlin, attracted thither by the rising reputation of its university and secretly animated by a desire to inquire for himself into Stromeyer's recently published discovery of subcutaneous tenotomy. The result of the attack of infantile paralysis from which he had suffered was that deformity of the left foot which he afterwards described as talipes equinovarus. From the beginning of his medical career he had eagerly studied all he could find that had been written on the subject, and had patiently suffered much from various apparatus. As was remarked by the writer of the biographical sketch that appeared in THE LANCET in 1854, "The preface to Dr. Little's 'Treatise on Club Foot' (1839) reads an instructive lesson to practical men of the danger of being led to oppose a grand discovery like that of Stromeyer on account of its running in some degree counter to their prejudices, whilst it illustrates a fact that contemporaries not renowned as practical men may correctly appreciate the value of a practical discovery. Professors J. Mueller and Froriep, after hearing from the subject of this memoir the arguments for and against subcutaneous tenotomy, unhesitatingly urged him to place himself under Stromeyer's care, whilst every other authority in Germany whom he consulted was opposed to it." The English surgeons, among whom was Sir Astley Cooper, were emphatic also in their condemnation of the operation. Time, however, showed how little the *à priori* arguments, even of the most experienced surgeons, may be worth.

At Berlin Dr. Little was a diligent attendant upon the lectures and private instruction of the great physiologist and comparative anatomist Johannes Mueller of Ehrenberg, Lichtenstein, and Wiegman. Through the introduction of Dr. Grant, and the fact of his having lectured on comparative anatomy at the London Hospital, Mueller treated the young Englishman as a colleague, placed his private workroom at his service, allowed him to dissect several specimens of club-foot in the museum, and afforded him the opportunity of close association with Henlé, Schwann, and Remak, who were beginning to profit by the previous labours of Mueller and were unfolding to the medical world the wonders of histology. In 1835 and 1836 Dr. Little visited Leyden, Leipsic, and Dresden, seeking advice and information on the advisability of submitting himself to Stromeyer's care, and everywhere meeting with shakes of the head and discouragement. Determined to see for himself he visited Hanover, and having seen Stromeyer's practice and some of its results he took the momentous decision of submitting himself to operation unknown to his nearest relatives in London, who would, he feared, have tried to prevent him had they known of his intention. The result was most satisfactory to him, and after a sojourn in Hanover, where

he availed himself of Stromeyer's kindness in allowing him to operate on a patient, in July, 1836, he returned to Berlin. On his reappearance in that city his emphatic testimony as to the success of Dr. Stromeyer's practice and the silent evidence of his own once deformed but now nearly corrected foot caused a revulsion of feeling in favour of subcutaneous tenotomy. That distinguished surgeon, Dieffenbach, became its enthusiastic advocate and performed many operations. In Berlin Dr. Little treated upwards of thirty cases of club-foot, and the experience thus gained, together with his pathological investigations in Mueller's workroom, supplied him with material for his inaugural dissertation or thesis, "Symbolæ ad Talipedem Varum Cognoscendum," on his taking the degree of Doctor of Medicine in 1837. This dissertation was the first monograph on tenotomy ever published, and even at this day, fifty-seven years afterwards, it remains a suggestive and instructive essay on the origin and treatment of club foot, and an evidence of the acumen and industry of its author, whose opinions formed at that early date are still held by many surgeons. The illustrious Louis Stromeyer has dubbed him "the Apostle of tenotomy," and in after years always attributed his own fame to the enthusiastic advocacy of his patient and pupil, and on the occasion of the celebration in Hanover of the jubilee of his Doctorate, when distinguished men from all parts of Europe and America congregated to do him honour, he exclaimed, in greeting Dr. Little, "I owe all this to you." In the same year Dr. Little became a Licentiate of the Royal College of Physicians—the Membership was not then instituted—and in 1839 he settled in Finsbury-square, and having published his treatise on Club-foot and Analogous Distortions, which has since been translated into various languages, he began, with the help of various friends and relatives of patients, the foundation of the Orthopædic Institution, now the Royal Orthopædic Hospital. A vacancy occurring on the medical staff of the London Hospital, he became a candidate, and, after a long and expensive canvass of the governors, Dr. Little, who received the unanimous support of the medical staff, was elected assistant physician. His colleagues on the staff were: Dr. Frampton, Dr. Billing, and Dr. Gordon, physicians; Mr. Andrews, Mr. John Scott, and Mr. Luke, surgeons; Dr. Cobb and Dr. Frampton, jun., assistant physicians; and Mr. Hamilton, Mr. "Jack" Adams, and Mr. Curling, assistant surgeons. In 1844 he was appointed sole lecturer on medicine, and in 1845 became physician to the hospital.

In the year 1844 Dr. Little severed his connexion with the Royal Orthopædic Hospital, and his resignation was accompanied by that of Lord Eldon and other influential supporters of the charity. In the year 1863, finding that the work of lecturing and teaching at the London Hospital in conjunction with private practice was too arduous, he resigned the post of senior physician which he then held. On accepting this resignation "with extreme regret," the Court of Governors passed the following resolution: "That this Court desires to avail itself of the present opportunity of recording the deep sense entertained by the Governors of his great professional ability, his unvarying kindness towards his patients, and his courteous demeanour on all occasions throughout a lengthened and highly valued connexion of more than twenty-three years with this important charity." In 1869 Dr. Little was elected a member of the house committee of the hospital, a position in which he was able to take a share in the affairs of his old school and hospital, which he preferred to the ornamental office of consulting physician. He continued to attend the meetings of the committee for many years until increasing deafness hindered him from joining in their discussions. In 1884 Dr. Little ceased to reside in London, and soon after that time retired from practice, though he continued to take a keen interest in all that went on in the medical world. A Londoner by birth, he had always a warm appreciation of quiet rural pleasures, and was never so happy as when he could retire after a hard day's work to his house at Walthamstow, or in later years in Kent. His fatal illness was only of ten days' duration, and he retained his faculties almost up to the moment of death. Dr. Little was for many years consulting physician and one of the trustees of the National Orthopædic Hospital. He also held the post of visiting physician to the Asylum for Idiots at Earlswood and to the Infant Orphan Asylum, and was consulting physician to the Royal Hospital for Incurables.

His contributions to literature were chiefly on orthopædic subjects. His most important work, "On the Deformities of the Human Frame," was published in 1853. In this book, among other original observations, will be found an accurate description of two cases of pseudo-hypertrophic paralysis, to which, however, no name was then assigned, and which some years afterwards was described by Duchenne of Boulogne, and became known by his name. Various deformities were also first noticed and classified, notably talipes calcaneo valgus. To the subject of this memoir also belongs the credit of first calling attention to infantile spastic paralysis and the deformities that it produces, and this malady is now known in America as "Little's Disease." Section of the tibial tendons in club-foot was first advocated and performed by Dr. Little, Stromeyer having originally only operated on the tendo Achillis. Besides papers read at the societies, Dr. Little's contributions to the orthopædic literature included a treatise on "Ankylosis, or Stiff Joint," published in 1843; "On Spinal Weakness and Spinal Curvature," in which he demonstrated the beneficial results of treatment on curvature resulting from pleurisy, published in 1868; and in conjunction with his son he published, in 1882, a monograph on "In-knee, and its Treatment with and without Operation." His contributions to the literature of pure medicine were not many, consisting of occasional articles in our columns and papers read before the various medical societies, of some of which he was an active member, having been a vice-president of the Pathological Society. He was also elected a member of numerous foreign scientific bodies. He was president of the Hunterian Society, and his Oration delivered in 1852 was mainly devoted to an elaborate history of the experiments made upon the effects of the introduction of blood and medicinal substances into the veins of men and other animals. He showed that since the discovery of the circulation many lives had apparently been saved by the timely injection of wine, antimony, water, and salines. The practice of saline injection in cholera was proposed by O'Shaughnessy in 1832 and put into practice by Latta with encouraging results. Dr. Little had recourse to it in the epidemic of 1832 but not with very encouraging results, only one patient out of six operated on by him and his colleagues recovered permanently. He advocated the addition of alcohol to the solution previously employed, and in the subsequent epidemic of 1848-49 he thus treated eight of the worst cases of cholera collapse. Of these four were moribund and did not evince the usual transient reaction; of the other four three recovered. In this oration Dr. Little suggested the use of saline injection or transfusion in tetanus and hydrophobia, with the hope of tiding the patient over the crisis of the disease. Actively engaged as he was in lecturing on the theory and practice of medicine and in clinical instruction, he may be said to have taught with the tongue rather than with the pen. Those who attended his cliniques at the London Hospital, delivered at the bedside or in the lobby of the ward, always spoke with appreciation of the valuable practical information conveyed and of his untiring willingness to draw upon his stores of experience and research for the benefit of inquiring and earnest students. It was as a teacher, not as a lecturer, that he shone.

Dr. Little leaves two sons in the medical profession.

PROFESSOR JOSEPH HYRTL,

VIENNA.

PROFESSOR JOSEPH HYRTL, the great anatomist, died on Tuesday last, at his country house at Perchtoldsdorf, near Vienna, at the ripe age of eighty-four. He had resigned his professorships at Vienna for many years, but his memory has always remained green, not only in the great Austrian school, of which he was for so many years an ornament, but throughout the civilised world as the first great teacher of topographical and regional anatomy. He was more than an able, versatile, and popular lecturer; he was a man of the highest talents, both as investigator and expositor. It must be remembered that forty-two years ago, when his celebrated treatise, "Handbuch der Topographischen Anatomie," appeared, regional anatomy was untaught in the schools and unrecognised as a science; whereas it may now be fairly described as the highest development of anatomy, and as such must be studied by every physician and surgeon. He was, moreover, not only a theoretical anatomist, but was particularly well versed in one practical

side of his calling. He was widely known for his skill in the preparation of anatomical specimens.

A list of Professor Hyrtl's chief works shows his devotion to his science. They are as follows, and the first three have gone through many editions:—"Ueber das innere Gehörorgan des Menschen und Säugethiere"; "Handbuch der Topographischen Anatomie, und ihrer praktische medicinisch-chirurgischen Anwendungen, Zweite Auflage" (2 vols., 8vo, Wien, 1853); "Lehrbuch der Anatomie des Menschen mit Rücksicht auf physiologische Begründung und praktische Anwendung"; "Ueber die Selbsteuerung des Herzens, ein Beitrag zur Mechanik der Aortenklappen"; "Handbuch der praktischen Zergliederungskunst, als Anleitung zu den Sectionsübungen und zur Ausarbeitung Anatomischer Präparate"; "Die Blutgefässe der menschlichen Nachgeburt in normalen und abnormen Verhaltnissen"; "Die Doppelten Schläfelinien der Menschenschädel und ihr Verhaltniss zur Form der Hirnschale"; "Cranium Cryptæ Metelicensis, sive Syngnathiæ veræ et spuriæ casus singularis." It is greatly to be regretted that no English editions exist of these valuable monographs. It is the second book on the list, the Handbook of Topographical Anatomy, which marks an era in anatomical study.

In spite of the invariably anatomical character of his writings and teachings Professor Hyrtl was not narrow in his learning or his tastes. He had a great and wise appreciation of art and of other sciences besides his own. He was a linguist, a very liberal-minded man, and a man of unbounded pecuniary generosity.

PROFESSOR GEORGE EDGEWORTH FENWICK, M.D., MONTREAL.

THE medical profession of Canada has lost one of its most valued members, in the death of Dr. George Edgeworth Fenwick, which occurred on June 26th, 1894, at the age of sixty-nine years. The deceased gentleman was born in Quebec, and commenced his medical studies in the Marine Hospital. In May, 1846, he passed his examinations at McGill University, but did not receive his diploma till June, 1847, however, as he was not of age at the time of passing. Since then he has resided in Montreal, where, by industry and enthusiasm, he had reached the highest distinction as a surgeon. Dr. Fenwick had been connected with McGill University for thirty years, and at the time of his death was Emeritus Professor of Surgery. The Montreal General Hospital was the scene of much of his surgical work, and by that work he had made a name and fame wider than the Dominion. In thyroidectomy, lithotomy, and excision of joints his experience was probably unequalled in the colony. Although he had reached first rank before the days of antiseptic surgery, he ardently took up and practised the Listerian principles as soon as their value was demonstrated. Dr. Fenwick was of a most genial and pleasant disposition, and very popular with his professional brethren, from whom he had received many offices of honour, as Governor of the College of Physicians and Surgeons of Quebec, Provincial President of the Canada Medical Association, President of the Medico-Chirurgical Society, &c. He was one of the oldest militia surgeons, and had been in service with the Montreal field battery during the Fenian raids in 1866 and 1870. Dr. Fenwick was one of the founders of the *Canada Medical Journal*, to which he had contributed many articles indicating vigorous and independent thought. He had also written a *brochure* on excision of the knee. Dr. Fenwick was one who constantly strove for the honour and dignity of the profession, and his brethren found him always ready to assist in the most pleasant and unselfish manner. He had been in failing health for a long time, and during the last two or three years he had to a considerable extent withdrawn from general practice. He succumbed finally to cerebral hæmorrhage. The large attendance of leading men of the profession and laity at the funeral testified to the general esteem in which he was held. The medical board of the Montreal General Hospital passed resolutions expressing sorrow at the loss of its leading surgeon, and testifying to his worth; from these we append a paragraph: "Much of the great reputation which the Montreal General Hospital enjoys both at home and abroad as a successful school of practical surgery is due to the good and efficient work performed by our late lamented colleague in its wards. Upright and honourable in all his relations of life he enjoyed alike the respect and esteem of friends, students, and professional associates."

Medical News.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The following have passed their Second Professional Examination:—

Four years' scheme.—W. J. Beveridge, A. E. V. Blake, L. E. Fannin, A. E. Faulkner, J. G. Gill, G. Hungerford, D. Kennedy, M. McGrath, A. M. McKelvey, C. Odevaine, De Courcy Potterton, and F. W. Woods.

Five years' scheme.—J. Campbell, A. J. Eades, and V. Maher.

Anatomy, Physiology, and Histology.—F. Hall, F. J. C. Heffernan, G. A. Kearney, W. F. Kennedy, W. M. Power, and C. J. Vahey.

Omitted from list of passes of First Professional Examination.—B. McM. Coffey.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. F. Kolbrausch, Director of the Physical Institute, Strasburg, has been offered the Chair of Physics vacated by the death of Professor Kundt.—*Gratz:* Dr. Anton has been promoted to an Extraordinary Professorship of Psychiatry and Neurology.—*Naples:* Dr. D'Amore has been recognised as *privat-docent* in Experimental Pharmacology.—*Rome:* Dr. Bignami has been recognised as *privat-docent* in Pathological Anatomy.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The quarterly court of the directors of the society was held at 11, Chandos-street, W., on Wednesday, July 11th, Mr. Christopher Heath, Vice-president, in the chair, the President, Sir James Paget, not being able to be present. Four new members were elected. The deaths of two widows were announced. There were no fresh applications for assistance. It was resolved to distribute £1211 among the fifty-four widows and nine orphans on the funds and the four orphans on the Copeland fund. The expenses of the quarter amounted to £44 8*s*.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Miss Ann G. G. Rolleston of Hyde Park-terrace, London, has bequeathed £1000 each to the Royal Sea Bathing Infirmary at Margate, the General Hospital at Birmingham, the St. Marylebone Home for Incurables, the Hospital for Diseases of the Throat, Golden-square, and the Samaritan Free Hospital for Women and Children, Marylebone-road, and £500 to the Birmingham and Midland Eye Hospital at Birmingham.—An anonymous donor has contributed £2000 for the cost of one house at the Royal National Hospital for Consumption at Ventnor, in memory of two daughters who died from phthisis.—Mr. John Hill, late of St. Margaret's, Leigham Court-road, Streatham, has bequeathed £250 to the Home for Incurables, Clapham-road. The late Mrs. Saul Bonnor of Brockley has bequeathed £100 each to the Cancer Hospital, Brompton, the London Fever Hospital, the Hospital for Women and Children, Lower Seymour-street, the Royal Hospital for Incurables, and the Royal Hospital for Diseases of the Chest.—Mr. John Maple of Bedford Lodge, Hampstead, has given the Middlesex Hospital a donation of £1000.—A donation of £500 has been received from Mr. George Hanbury for the building fund of the Paddington-green Children's Hospital.—The following donations have been received by the board of management of the British Home for Incurables towards the funds to open the new Home free of debt—namely, the Messrs. Rothschild 200 guineas, the Mercers' Livery Company 50 guineas, and the Haberdashers' Livery Company 10 guineas. The Mercers' Company has also made a grant of 100 guineas to the Poplar Hospital for Accidents, and a further donation of 50 guineas to the Great Northern Central Hospital. The Corporation of the City of London has contributed 50 guineas to the Belgrave Hospital for Children, Gloucester-road, Pimlico. The Goldsmiths' Livery Company has made grants of £100 each to the Royal Westminster Ophthalmic Hospital and the Royal Hospital for Incurables. The Grocers' Livery Company has voted £50 to the North-Eastern Hospital for Children, Shadwell. The Clothworkers' Livery Company has given a donation of £50 to the Chelsea Hospital for Women, Fulham-road. The Skinners' Livery Company has contributed £25 to the Building Fund of the British Home for Incurables.

A SPECIAL general meeting of the London and Counties Medical Protection Society was held on July 10th, at 12, New Court, Lincoln's-inn, for the purpose of confirming the amended Articles of Association unanimously adopted at the special general meeting held on June 19th. The new articles were submitted and duly confirmed.

BURIAL REFORM ASSOCIATION. — The annual meeting of this association was held recently at the Mansion House, London, through the kindness of the Lord Mayor. The chairman, the Bishop of Gloucester and Bristol, said the two main objects of the association were—the simplification of the funeral ceremonial and the diminution of expenses connected with it. Sir W. H. Fowler moved a resolution condemning the use of durable coffins and extravagant floral display, and from a sanitary point of view he urged a modification of the present mode of burial. He thought cremation would be an effectual remedy, only that it would mean a social revolution. Archdeacon Sinclair also spoke of the necessity of burial reform. A resolution was adopted asking the Government to institute a departmental inquiry into earth-to-earth mode of burial with a view to the adoption of measures to render burials innocuous.

PRESENTATIONS TO MEDICAL MEN.—On Thursday, June 21st, at the Alexandra Hotel, Liverpool, Mr. J. J. Hanly was presented, on behalf of his friends and patients, with an illuminated address and a gold watch, and, on behalf of the Good Intent Lodge of Oddfellows, with a handsome marble clock.—Mr. R. F. Granger, of Whitby, has also received a presentation from the class of ladies at Whitby to whom he has acted as lecturer.—Mr. Henry P. Cuthbert, L.R.C.P.Lond., M.R.C.S., of Clun, Salop, has been presented on the occasion of his marriage, by his friends in that town, with a case of surgical instruments and a microscope.—On July 5th the ladies of the Babbington Ambulance Class, through their hon. secretary, Mrs. Fowler, presented to Dr. Neilson a carriage watch and case as a memento of the valuable instruction and pleasure they had received at his lectures. — The testimonial which has been raised for Dr. Gustav Adolph Abrath of Sunderland has been closed. The subscription list amounts to £247.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—The annual meeting of this society, which now numbers upwards of 200 members, was held on the 12th inst. at 11 Chandos-street, Cavendish-square. The following officers were appointed for the year 1894–95:—President: W. J. Tyson, M.D., M.R.C.P. Lond., F.R.C.S. Vice-Presidents: A. H. Robinson, M.D., and W. Gowans, M.D. Council: Professor W. C. Arnison, M.D., R. C. Benington, M.D., B.S., J. Crawford, M.D., M.R.C.P., C. J. Cullingworth, M.D., F.R.C.P., F. S. Palmer, M.D., Professor G. H. Philipson, M.A., M.D., D.C.L., F.R.C.P. Lond., G. W. Ridley, M.B., M.S., F.R.C.S. Eng., W. Slater, M.D., C. Vise, M.D., W. G. Walford, M.D., W. T. Wilson, M.A., M.D., and T. O. Wood, M.D., M.R.C.P. Honorary Secretaries: W. C. Beatley, M.D. (Hon. Sec. for North and Treasurer), and R. H. Milson, M.D. (Hon. Sec. for South). In the evening the members and their friends dined together at the Café Royal, Regent-street.

HOVE SANITARY DEPARTMENT.—A report was submitted to a meeting of the Hove Commissioners on Thursday last as to the reorganisation of the sanitary department of the town. During the year ended March 28th last the following salaries were paid: medical officer of health, £100; sanitary inspector, £155; assistant inspector, £98 16*s.*; office clerk, £78; occasional assistance, £41 16*s.*; total, £473 12*s.* The committee recommended that in future the board should take half the salary of the medical officer of health and the sanitary inspector from the Parliamentary grant through the city clerk, and that in future the staff be paid as follows: medical officer of health, £150; head inspector (holding the certificate of the Sanitary Institute of Great Britain), £170; three assistants, £240; and clerk, £78; total, £638. Deducting the sum to be received from the city clerk, the total cost to the town for salaries would thus be £478. The committee further recommended that Mr. E. S. Medcalf be appointed medical officer of health. It was pointed out that the increased cost to the town would only be about £5 per annum. After some discussion, during which several members expressed a desire for further information, the report was ordered to be referred to the general purposes committee.

MEDICAL MAGISTRATE. — Mr. John Alcock, M.R.C.S., L.M., of Burslem, has been placed on the Commission of the Peace for the county of Stafford.

THE special courses of training lectures instituted by the National Health Society, and carried on year by year in the lecture-rooms of the offices at 53, Berners-street, W., will recommence in October next.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Accommodation of the House of Commons.

A COMMITTEE, with Mr. Herbert Gladstone as its chairman, is inquiring how best to improve the accommodation of the House of Commons. Already it has held several meetings, and it would seem as though it has come to the conclusion that, so far as the accommodation for members of the legislative chamber itself is concerned, there is little to be done short of absolute reconstruction. The committee is, however, devoting a considerable amount of attention to the Press Gallery and the rooms attached to it, where parliamentary journalists do most of their work, take most of their meals, and obtain some measure of recreation. These rooms are notoriously inadequate, alike in point of size and arrangement, and their sanitation is far from satisfactory. On the occasion of a great debate, when there is a large attendance of reporters, summary writers, artists, and leader writers, to say nothing of news messengers and telegraph and telephone operators, the atmosphere becomes so vitiated as to be almost intolerable, and there is very little freedom in moving about. On such an occasion, too, and, indeed, during the greater part of the session, the Gallery itself is found to be much too small for the demands made upon it. Mr. Herbert Gladstone and his committee have, however, visited and carefully examined the whole premises, and, further, they intend to take evidence from a number of representative journalists. Another matter which is being considered by the committee is the proposal to remove the Members' Kitchen from the basement and to locate it, after the fashion in modern hotels, in the top storey of the building. Overtures have also been made to the authorities of the House of Lords with a view to placing at the disposal of members of the House of Commons certain rooms in the former which are said to be very little used.

HOUSE OF LORDS.

TUESDAY, JULY 17TH.

The Aliens Bill.

The Earl of Rosebery said the Government had given this Bill a close examination, which had failed to strengthen any prepossessions they might previously have held in its favour. Considerable discussion took place, and the Bill was eventually read a second time.

The Prevention of Cruelty to Children Bill was read a third time and passed.

HOUSE OF COMMONS.

FRIDAY, JULY 13TH.

Indian Cantonments Act.

Mr. H. Fowler intimated to Mr. Stansfeld that it was necessary that the Bill to amend the Indian Cantonments Act should be published in the Indian *Gazettes* and referred to local Governments before being passed into law. He assured the right hon. member that the pledge given by the Government would be fulfilled.

TUESDAY, JULY 17TH.

Cholera Prophylactics.

Mr. Shaw-Lefevre informed Mr. Heneage that suspected cases of cholera occurring on board vessels arriving from foreign ports were at once communicated to the medical officer of health by the officers of Customs. If the Local Government Board possessed information not publicly advertised as to serious outbreaks of cholera at foreign ports they would communicate with the local authorities.

Health of Malta.

Some questions were asked upon this subject, the replies being substantially the same as the answer of the Marquis of Ripon to Viscount Sidmouth given in the House of Lords on the 9th inst. and referred to in our last issue. It was, however, stated that, though many cases arise in Malta, much fever is brought there from the towns and harbour of the eastern Mediterranean, and the fever should be called Mediterranean rather than Malta fever.

THURSDAY, JULY 19TH.

The Coal-dust Commission.

Mr. John Ellis asked the Secretary of State for the Home Department whether, having regard to the disasters and loss of life which have taken place in coal mines through the presence of coal-dust and the dangerous use therein of shot-firing, the Government will be prepared to press forward a measure next session carrying out the recommendation of the Royal Commission on Coal-dust in their report of June 16th, 1894, that the Secretary of State should be given further powers to limit and prohibit the use of gunpowder in fiery, dry, or dusty mines.—Mr. Asquith said he hoped next session to be able to

introduce a Bill dealing with the matters discussed in the report, and especially to carry out the recommendations in relation to shot-firing in coal mines.

Cholera Precautions in Ireland.

Mr. Field asked the Chief Secretary to the Lord-Lieutenant of Ireland whether, in view of a possible visitation of cholera and the fact that the President of the Local Government Board for England has deemed it advisable to supplement the work done by the permanent officials by the reappointment of extra medical inspectors for another year, extra medical inspectors have been appointed in Ireland; and whether the Local Government Board for Ireland have made any request to the Government for the appointment of extra inspectors; and if not, whether the Irish Board are satisfied with the sanitary condition of the country and its preparedness to resist an epidemic of cholera.—Mr. John Morley replied that Treasury authority was obtained last year for the employment of an additional inspector for a period of seven months for special work connected with precautionary measures against cholera. This period expired on March 31st, and application was made by the Local Government Board to retain the services of this temporary medical inspector for five months longer; but, as no positive necessity was shown at the time for the extra expense involved, he was of opinion, from the information laid before him, that no case had been made out for approaching the Treasury in the matter. In some localities undoubtedly much remained to be accomplished in connexion with improved water-supply, efficient drainage, and removal of nuisances; but these were matters for the attention of the Board's permanent staff, which contained four medical men.

IN COMMITTEE.

Food Products' Adulteration.

The Select Committee of the House of Commons on the question of the adulteration of food products again met on Friday, July 13th, Sir Walter Foster in the chair. Two witnesses gave evidence in respect to the city and county of Gloucester.

Colonel Coutes Hayward, examined by the chairman, said he was connected with an association which was formed in 1892 called the Dairy Produce Defence Association. The object of the association was to ascertain the extent to which adulterated produce, especially butter and milk, was sold in the city and county of Gloucester. The Adulteration Acts were practically in abeyance in the city. The association, as a matter of fact, did not do anything in regard to milk, but they had numerous samples of butter, which were bought in the city of Gloucester, analysed. Those analyses proved that the adulteration of butter prevailed extensively. They purchased butter from ninety-four shops in the city of Gloucester. In the case of fifteen of those samples none were adulterated with less than 20 per cent. of foreign fats, and he believed that in some cases they were so adulterated to the extent of 50 per cent. and over. The association then went to the town clerk, and the officer whose business it was to take action under the Act stated that he would at once take samples. The officer only got evidence in four cases sufficient for prosecution. Samples were taken by the police, acting under the instructions of the County Council, at Cheltenham and other places in the county, and according to the samples taken a better state of matters existed in the county than in the city. His experience taught him that it was of no use to use men to obtain samples of adulterated butter or milk. Suspicion was at once aroused. A policeman in plain clothes was of no use for the purpose. He accounted for the absence of adulteration in the samples taken by the County Council officers by saying that the samples were not procured in a skilful manner. The retailers had a shrewd guess of the purpose for which the butter was bought. Since their proceedings in 1892 the association had taken no active proceedings; but he argued that what they had done showed that the adulteration of butter existed to a large extent and that apathetic corporations like that of the city of Gloucester required to be stimulated by the central authority of the Government. In reply to questions by members of the committee the witness said he did not object to the sale of margarine if it was sold as such and not as butter. He was of opinion that if it was prohibited to colour margarine to look like natural butter that would have a very good effect in stopping adulteration. Uncoloured margarine had the appearance of lard. He was decidedly of opinion that the adulteration of butter reduced the price of the genuine article.

Mr. George Emberley, public analyst for the city and county of Gloucester, who was next examined by the chairman, said he had been a public analyst for ten years and during that time had made something like 3000 analyses of butter. He would say that about 25 per cent. of the butter which was sold was adulterated and that about 10 per cent. of that adulteration was detected. He was of opinion that samples of foreign butter should be analysed on its landing in this country, that local authorities should have greater latitude in the employment of agents to take samples from the retail dealers, and that there should be a central authority to stimulate apathetic local bodies to carry out the Acts to the extent at least of taking a certain number of samples in each year. He thought that antiseptics should be prohibited not only in butter, but in all articles of human food. In regard to water, he regarded anything over 16 per cent. as a useless addition and therefore adulteration. In regard to milk, he thought that a standard of 15·5 of solids and of 3 per cent. of fat would be perfectly fair to all parties. That was a standard which would get over the question of what was called "watering down." There was no doubt that the low standards fixed by Somerset House prevented public analysts in the country reporting cases, because disagreement with Somerset House to a small man, although he was perfectly right, would be a most serious thing.

The committee met again on Wednesday, the 18th inst., Sir Walter Foster presiding.

Dr. Bannister, of the Government laboratory at Somerset House, presented himself for further examination. In reply to questions by Mr. Jeffreys, he expressed an opinion adverse to the fixing of a standard for milk, saying he had not the least doubt that if a standard were established the best and richest milks would be watered down to it. He would not suggest that foreign butter should be interfered with at the ports of arrival, but rather that the stringency of the Adulteration Acts should be increased. At the laboratory they tested both home and foreign butter, but generally speaking all the adulteration was found in the latter. Questioned by Mr. Kearley, witness said that in his opinion the public analysts throughout the country did their work remarkably well. He admitted that the Somerset House analysts might not have so wide and varied an experience with regard to milk as the public analysts, and further, that it might be desirable to have more intercommunication between the two classes of analysts as to methods of analyses and new developments. Unfortunately there was no journal published at Somerset House which could be made the medium of such intercommunication. In reply to Mr. Colman, Dr. Bannister said that in respect of its bone and tissue forming properties he regarded separated milk as an excellent thing for children, and preferable to skim milk, which after all was milk on the point of becoming sour.

The committee sat for a shorter period than usual, and when they rose had not completed the examination of Dr. Bannister.

The Petroleum Acts.

The Select Committee of the House of Commons appointed to inquire into and report upon the law relating to the keeping, selling, and conveyance of petroleum and other inflammable liquids, and the precautions to be adopted to prevent the sale of dangerous lamps, opened their inquiry on Friday, July 13th. Mr. Mundella is chairman of the committee, and amongst the members is Sir Henry Roscoe.

Colonel Majendie explained that there were in existence three Acts relating to petroleum, one the principal Act of 1871, the second the Petroleum Act of 1879, and the third the Petroleum Hawkers Act of 1881. In the first of these Acts an open test and a flash point of 100° F. were used, but in view of the strong representations made by the trade and others as to the defective character of this test it was replaced by its ascertained equivalent of 73° F., and the new Abel close test. The operation of the three Acts extended only to such petroleum as gave off when tested by the Abel close test an inflammable vapour at less than 73° F. After much inquiry into the subject, both in this country and abroad, he had come to the decided opinion that the existing law did not nearly provide for the public safety. He knew of no country where the control over the storage of mineral oil was more defective than this. Another defect in the law, in his opinion, was the absence of any definite regulations of general application to secure the safe keeping of petroleum and prevent its outflow into drains, sewers, and elsewhere. The absence of any power for an inspector to seize petroleum except in the case of a hawker was another defect. He would like to know the view of the trade on the subject of the flash point before he said anything with regard to it. Legislation with regard to the lamps used was urgently required. Very many and very serious accidents occurred which were due to lamps, and he would give as an illustration the accident to Lord Romilly. It would be shown that the flash point of the oil in that case was something like 110° F., and it was patent that the defect was in the lamp. With regard to the conveyance of petroleum in bulk, there was no special control over the ships, which might be well or badly built. Reviewing the whole case, he expressed the opinion that the defects in the existing law could be remedied with a due regard to the requirements of the trade and the interests of the public.

The committee then adjourned for a week.

The Scottish Local Government Bill: The Right of Appeal of Poor-law Medical Officers.

A discussion of considerable interest to medical men generally, and especially to those holding Poor-law appointments in Scotland, took place on Tuesday, the 17th inst., at the meeting of the Grand Committee of the House of Commons, to which the Scottish Local Government Bill has been referred. Clause 45 of the Bill contains several provisions as to the tenure and duties of various parochial officers who under the new state of things will be transferred to the parish councils, and Mr. MacGregor proposed to add a provision to the effect that "no medical officer shall be liable to dismissal by the parish council from any cause whatsoever, without the power of appeal to the Local Government Board," that is to say, the authority intended to succeed the present Board of Supervision. Mr. MacGregor based his claim on behalf of medical men mainly on the fact that inspectors of the poor at the present moment have this right of appeal.

Dr. Farquharson supported the claim, assuring the Committee that very often medical officers were subject to capricious local feeling, and suffered seriously in consequence.

Sir George Trevelyan, the minister in charge of the Bill, said he entertained very great respect for the medical profession, but he could not accept this proposal. What the Government desired to do in this Bill was to hand over the work of the present parochial boards to the parish councils, and he was unwilling that in doing so they should show any lack of confidence in the latter. If it were found by experience that the existing system worked badly under the new regime then it would have to be altered, but this he did not think was the time to make an alteration in the law.

Sir Herbert Maxwell, speaking as one with considerable experience of Poor-law administration, assured the Government that this capricious local feeling to which Dr. Farquharson had referred could not be excluded, and expressed the opinion that the proposal of Mr. MacGregor was a sound and reasonable one.

Dr. Clark cited a case in Halkirk in Caithness-shire where a medical officer was deprived of his office upon political grounds, but where happily he was restored under the pressure of public opinion.

Mr. Bine Renshaw did not think such a case would help the proposal very much, for apparently no real harm had been done.

Mr. William Whitelaw took the view that not only medical officers, but also the governors and matrons of poorhouses in Scotland should have a right to appeal to the Local Government Board.

The Lord Advocate asked the Committee to bear in mind that this clause referred only to the successor of the medical officer of the parochial board—that was to say, to the medical man who doctored the poor. It had nothing to do with medical officers of health, and the considerations which entered into the one case did not necessarily, or probably at all, enter into the other. It was easy to understand that a medical officer of health should have a certain measure of protection, because he had to go about and call attention to the insanitary or dirty condition of people's premises, and no doubt would incur ill-will for so doing. But in the case of the physician of the poor there was not that conflict between duty and interest, nor that liability to offend.

Mr. MacGregor expressed surprise at what the Lord-Advocate had said. He had himself been a Poor-law officer, and he knew there was nothing more likely to happen than a controversy between the medical

officer and some member of the parish council. After some further discussion a vote was taken, when 23 members voted for Mr. MacGregor's proposal, and 29 against it. The Poor-law medical officers, therefore, remain without a right of appeal to the central authority.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARTHUR, J., L.R.C.P., L.R.C.S.Edin., has been appointed Medical Officer for the Gabalfa Sanitary District of the Cardiff Union.

AUSTEN, A. W., L.R.C.P., L.S.A., has been appointed Medical Officer to the Gas Light and Coke Co. Provident Club, City of Westminster and William IV. Oddfellows' Clubs, Court Pride of Pimlico Foresters' Club, and United Patriots Benefit Society.

BANKES-PRICE, H., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Coventry and Warwickshire Hospital.

BENSON, ANNETTE M., M.B. Lond., B.Sc., has been appointed First Physician to the Kama Hospital, Bombay.

BOTHWELL, G. GRANVILLE, M.B., C.M. Aberd., House Surgeon of Halifax Infirmary, has been appointed House Surgeon to the Croydon General Hospital.

DAVIDSON, S. G., M.B., M.S. Edin., has been appointed Parochial Medical Officer for Insch and also Medical Officer for the Parish of Leslie.

DEANE, C. C., M.B., B.Ch., B.A.O. Dub., has been appointed Medical Officer for the Loughgall Dispensary District, vice Leeper.

FOSTER, J. R., M.B., M.S. Edin., has been appointed Assistant Medical Officer for the Workhouse of the Cardiff Union.

HODGSON, W., M.R.C.S., has been appointed Medical Officer for the Sanitary District and the Workhouse of the Reeth Union.

GARDNER, ERNEST, L.D.S., R.C.S. Eng., has been appointed Dental Surgeon to Westminster Hospital.

HUGHES, J. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sutton-on-Trent Sanitary District of the Southwell Union.

HUTCHINSON, F. H. G., M.B., C.M. Edin., has been appointed Senior House Surgeon to the General Hospital, Cheltenham.

JOHNSTON, GEORGE F., M.D., M.S., M.A.O. Irel., has been appointed a Physician to the Out-patient Department of the Hospital for Epilepsy and Paralysis, Portland-terrace, Regent's Park.

LAVERY, C., M.B., M.S. Glasg., has been appointed Assistant House Surgeon to the Coventry and Warwickshire Hospital.

MCPHEE, D., M.B., M.S. Glasg., has been appointed Medical Officer for the Holme on Spalding Moor Sanitary District of the Howden Union.

PECK, E. G., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Queensbury Urban Sanitary District, vice Britton.

POLAND, JOHN, F.R.C.S., has been appointed Consulting Surgeon to the St. Pancras and Northern Dispensary, vice Henry Smith, F.R.C.S., deceased.

SUTTON, EDWARD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Poplar Hospital for Accidents, Blackwall, E.

THOMSON, D. G. P., M.B., C.M. Edin., has been appointed Medical Officer for the Eamont Bridge Sanitary District of the Penrith Union, vice Robertson.

TICKELL, H. M., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon to the Cheltenham General Hospital, vice Hutchinson.

TONKIN, ARTHUR J., M.B., B.Ch., Roy. Univ. Irel., has been appointed Resident Medical Officer to the Small-pox Hospital, Clayton Vale, Manchester.

WILLIAMS, H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Hospital at Denton.

WILLIAMS, J. D., M.B., M.S. Edin., has been appointed Medical Officer for the Roath Sanitary District of the Cardiff Union.

WILSON, J. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 3 Sanitary District of the Plympton St. Mary Union.

WOOD, J., M.D. Durh., B.S., has been appointed Medical Officer for the Leversedge Sanitary District of the Dewsbury Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

BATH EASTERN DISPENSARY.—Resident Medical Practitioner. Salary £100 a year, with furnished apartments, coal, gas, and domestic attendance. Applications to Colonel F. V. Eyre, hon. sec., Rockville, Lansdown, Bath.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and light provided.

CITY OF LIVERPOOL INFECTIOUS DISEASES HOSPITAL, Netherfield-road.—Resident Medical Officer at the City Hospital, North Netherfield-road. Salary £100 per annum, increasing £10 per annum to £120, as a maximum (subject to certain conditions), together with board, washing, and lodging at the Hospital. Applications to the Town Clerk, Town Clerk's Office, Liverpool.

GENERAL HOSPITAL, Birmingham.—Surgical Casualty Officer (non-resident) for one year.

GENERAL HOSPITAL, Birmingham.—Honorary Surgeon.

GENERAL HOSPITAL, Birmingham.—House Physician for one year. Salary £70 per annum, with residence, board, and washing.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with residence, board, and washing.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer (unmarried) for twelve months. Salary £150 per annum, with board and residence.

NORFOLK COUNTY ASYLUM.—Locum Tenens Assistant, for two or three months, August and September, and, if desired, October. Board, lodging, washing, &c., provided.

NORTH LONDON CONSUMPTION HOSPITAL, Hampstead, N.W.—Resident Medical Officer for one year. Honorarium £40 per annum, with board, rooms, &c., in the Hospital. Applications to the Secretary, Offices, 14, Fitzroy-square, London, W.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Honorary Surgeon.

SEAMEN'S HOSPITAL SOCIETY, "Dreadnought," Greenwich.—Junior House Surgeon for branch hospital, Royal Victoria and Albert Docks, E. Salary £50 per annum, with board and residence.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

STOCKPORT INFIRMARY.—Junior House Surgeon, for six months, with board and residence. An honorarium of £10 will be given after six months' satisfactory.

UNIVERSITY COLLEGE (DEPARTMENT OF PATHOLOGY), London.—Assistant to the Professor of Pathology. Apply to Professor Horsley.

Births, Marriages, and Deaths.

BIRTHS.

APPERLY.—On July 10th, at South Lea, Carlingford-road, Hampstead, the wife of Herbert Apperly, L.D.S. R.C.S. Eng., of a son.

ARNISON.—At 4, Fenham-terrace, Newcastle-on-Tyne, on July 15th, the wife of W. C. Arnison, M.D., of a daughter.

CLARKE.—On July 13th, at Bloemfontein, Orange Free State, South Africa, the wife of Geo. S. Clarke, L.R.C.P. Lond., M.R.C.S., of a daughter.

HENTSCH.—On July 11th, at Stockwell-road, S.W., the wife of John Page Hentsch, M.R.C.S. Eng., of a daughter.

KYFFIN.—On July 9th, at The Manse, Forton, Gosport, the wife of John Kyffin, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of a son.

MANSEL-HOWE.—On July 14th, at Londesborough House, Godstone, Surrey, the wife of S. S. Mansel-Howe, M.D., of a son.

MUSPRATT.—On July 12th, at Tantallon, Madeira-road, Bournemouth, the wife of Charles D. Muspratt, M.D., of a son (stillborn).

PEARSE.—On July 12th, at Ripley, Surrey, the wife of Frederick Edward Pearse, M.R.C.S., L.R.C.P., of a daughter.

SCOTT-TEBB.—On July 14th, at Charlcombe, Boscombe-hill, Bournemouth, the wife of W. Scott-Tebb, M.A., M.D., of a son.

MARRIAGES.

BENJAMIN—MORGAN.—On July 18th, at Christ Church, Ealing, John Knill Kinsman Benjamin, M.R.C.S., L.R.C.P., of Dorrington, near Shrewsbury, to Alice Sophia, youngest daughter of the late James Hungerford Morgan of Mangalore, India.

BRAY—KIRKPATRICK.—On April 24th, 1894, at Christchurch, Brunswick, by the Rev. C. P. M. Bardin, Percy Dean Bray, M.R.C.S. Eng., of Carisbrook, Victoria, fifth son of the late William Bray of Darlinghurst, Bognor, Sussex, England, and Sydney, N.S.W., to Florence, fourth daughter of the late Captain John Kirkpatrick, of Albert Park, Melbourne, Victoria.

COOK—NORTON.—On July 12th, at St. Mary's, Newington, by the Rev. Canon Palmer, rector, assisted by the Rev. W. Breton, curate of Christ Church, South Hackney, cousin of the bride, Herbert Cook, M.D. Lond., F.R.C.S., of 22, Newport-road, Cardiff, eldest surviving son of the late T. W. Cook and of Mrs. Cook, of 162, Cromwell-road, S.W., to Mabel Mary, third daughter of Selby Norton, M.D., of 87, Kennington-park-road, S.W.

GREAVES—SLACK.—On July 11th, at St. James', Croydon, Charles Henry Greaves, M.D., of Stafford, to Ethel Mary Asprey, youngest daughter of the late John W. Slack of Putney.

MOTHERSOLE—RALFE.—On July 12th, at St. John's, Birkenhead, by the Rev. Gerald C. Dicker, vicar, Robert Devereux Mothersole, M.D., M.S., F.R.C.S., of Bolton, son of the late Thomas Mothersole of Colchester, to Susanna Mary, eldest daughter of the late F. Whitfeld Ralfe of Llancaiach, Glamorganshire.

SCHOLEFIELD—MARSHALL.—On July 12th, at St. John's Church, Blackheath, Robert Ernest Scholefield, M.A., M.B. Oxon, youngest son of William Scholefield, Esq., late of Weltwood, Leeds, to Elizabeth Graham, eldest daughter of Rev. J. W. Marshall, vicar of St. John's, Blackheath.

DEATHS.

GOUDE.—On July 16th, suddenly, Herbert Goude, M.D., Resident Medical Officer of the Highgate Small-pox Hospital.

SMART.—On July 14th, at Scarborough, suddenly, John Cass Smart, M.D., of Combe Hay Manor, Bath, in the 79th year of his age.

SMITH.—On July 15th, at 24, King-street, Great Yarmouth, John Caporn Smith, M.R.C.P., L.S.A., aged 82 years.

TURNBULL.—On July 12th, at 3, Jesmond-terrace, Newcastle-on-Tyne, aged 36, William Turnbull, M.B., B.S., eldest son of the late John Lumsden Turnbull, Esq., of Gosforth, Northumberland.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 19th, 1894.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp in Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 13	29·65	W.	62	57	100	65	55	0·11	Cloudy
,, 14	29·66	W.	60	56	122	70	52	0·24	Cloudy
,, 15	29·79	S.W.	60	58	84	65	54	0·02	Cloudy
,, 16	29·94	S.W.	58	56	75	63	54	0·03	Raining
,, 17	29·81	S.W.	61	57	111	70	57	0·11	Cloudy
,, 18	29·66	S.W.	60	55	118	69	55	0·01	Cloudy
,, 19	29·74	W.	61	57	102	66	57	0·02	Cloudy

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

IN reply to more than one correspondent, we must refer enquirers into the constitution and dose of bromidia to the "Extra Pharmacopœia."

MEDICAL JOURNALS are frequently made the butt of jokes by their lay contemporaries when the former feel it their duty to warn the public against a hidden danger in some common act of daily life. This volatility, we suspect, more often arises from a desire to "let off steam" rather than from want of appreciation of efforts that are directed towards the public welfare. We cannot, however, excuse on the same grounds an American journal, which has so misunderstood the recent warning with respect to the liability of infection through the telephone mouthpiece that it gravely informs its readers that the germs of disease are now transmitted even over telegraph circuits. The acme of simplicity is reached, however, when the journal goes on to state that it is dangerous to converse by telephone with a person having a contagious disease.

MEDICAL ADVERTISEMENT IN NEW ZEALAND.

A VERY objectionable specimen of this evil is sent us in the form of an advertisement in the Napier newspaper by Dr. Bakewell, M.D. St. And., M.R.C.S.Eng., &c., formerly house surgeon of the Middlesex Hospital, London, of the Stafford County Infirmary, President of the Medical Board of Trinidad, &c. We are surprised to see a gentleman who has held such offices stoop to such low methods and set so bad an example to others.

H. W. P. (Manchester).—The local sanitary authority have undoubtedly power to carry water mains (or sewers) along the road in question. (See Sections 54, 32, and 16 of the Public Health Act, 1875.) They have also power, the water main having been laid down, to compel the owners of the houses referred to to provide a proper water-supply (Section 62). In regard to the control of the original landowner over the road, we are afraid it is impossible for us to enlighten our correspondent, as, to a large extent, the answer must depend upon the terms of the lease.

Messrs. Mayer and Meltzer inform us that they have constructed a trocar and cannula, similar to the one described by Mr. Alfred Kebbell in our last issue, at the direction of Mr. Godlee, for use in University College Hospital.

A RIVAL TO M. PASTEUR IN CLONMEL.

ACCORDING to the *Clonmel Chronicle* one of the magistrates, Mr. Shine, at the Cashel Petty Sessions boasted to a knowledge of an infallible remedy against the bite of mad dogs. If those who are bitten use it they will be saved a visit to M. Pasteur. Application is to be made to Mrs. O'Meara, of Kilrush; she will forward the preventive—but only on receipt of 5*s*. There is a strange mixture of philanthropy and business, and we fear we must add quackery, in this which ill becomes notice from the magisterial bench.

"TRIKRESOL."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 31st there is a Clinical Note by Professor Charteris and in THE LANCET of June 9th there is a letter from Dr. Lee in respect to the preparation called "trikresol" which we consider very misleading, both gentlemen evidently not being well informed as to the true nature of the product. Two samples of the preparation, obtained from the London agents, have been examined by us, and do not appear to be less poisonous than our No. 5 Refined Fluid Carbolic, with which we consider it, for disinfectant purposes, practically identical, although the price is very much higher. It is, like our No. 5 Refined Fluid Carbolic, a mixture of a certain percentage of crystallisable carbolic acid with a larger proportion of higher boiling tar acids, the latter, in fact, as in our No. 5 Refined Fluid Carbolic, forming the bulk of the product. Dr. Lee's statement in THE LANCET of June 9th, "that it is free from the poisonous qualities of carbolic acid," cannot be substantiated, as it practically represents in this respect the ordinary liquid carbolic acid so universally employed as a disinfectant for the last thirty years. We may say that for inhalation the vapour of our No. 5 Refined Fluid Carbolic cannot be more objectionable or poisonous than that of "trikresol," and on this point we draw your attention to the statements made by Dr. Sansom and Professor Crookes, as noted on the enclosed circular. Professor Charteris' statement as to the relative toxic powers of pure carbolic acid and "trikresol" is also, we feel sure, made on very insufficient grounds, being in direct contradiction to the results obtained by other scientific observers, who have carefully compared the relative efficiency as germicides of carbolic acid and the coal tar acids boiling at a higher temperature. It has long been known that there is a slight difference in persistency of disinfecting power in favour of the latter, owing to their lower degree of volatility; but, as even Professor Charteris' experiments show, pure carbolic acid acts more rapidly, and, in certain cases, therefore more effectively, as a germicide than when rendered less soluble and less volatile by dilution with the other tar acids present in "trikresol" and our No. 5 Refined Fluid Carbolic. Of course, on account of price alone, the mixtures of tar acids represented by our No. 5 Refined Fluid Carbolic and the preparation called "trikresol" are more suitable than pure carbolic acid for general use as disinfectants in the concentrated form. The mixtures of tar acids diluted with tar oils, resin, soap, glue, and water—so frequently sold as "non-poisonous" disinfectants—can but be regarded by well-informed scientific opinion as practically useless, or only efficient in ratio to the percentage (seldom exceeding 12 per cent.) of tar acids they contain.—We are, Sirs, yours truly,

Bradford, Manchester, June 29th, 1894. F. C. CALVERT AND CO.

AN appeal has been made to the public, written by Mr. Walter Besant, on behalf of the authorities of the Ragged School Union. Fifty thousand poor children are instructed and cared for in the 210 schools of the Union, and the authorities ask for money to send their charges on a health-seeking holiday. "No body of gentlemen," says their secretary, Mr. John Kirk, "better know the effects of hot weather in the overcrowded homes of the poor than do the readers of THE LANCET. The powers of resistance against disease possessed by our *protégés* are feeble, and unless during hot weather they are taken to our holiday homes there will be more than the normal amount of sickness among them during the early autumn. We speak from past experiences." To this appeal our only comment is that the address of the secretary is 37, Norfolk-street, Strand.

A. E. M.'s best course will be to make application to the medical officer of health of the district in which the building in question is situated. Mr. A. S. Norman, of Havant, is the medical officer of health of the rural sanitary district from which our correspondent writes.

NEW BATH TOWELS.

WE have received from Messrs. J. and J. Cash, of Coventry, specimens of a new bath-towel, constructed of a tape woven into towel substance in such a way that the serried edges of the tape come into contact with the skin, thereby producing considerable friction with its resulting comfortable sense of stimulation and exhilaration. These towels, we can understand, might be of considerable therapeutic assistance to persons with a sluggish skin or of a temperament slow to react to the stimulus of a cold bath.

THE USE OF ALUMINIUM FOR COOKING UTENSILS.

WE have received from the Illinois Pure Aluminium Company a price-list of their cooking utensils made of this metal. It is well known that the expense of production and the difficulty of uniting it by means of a suitable solder are two factors which have militated long against the general introduction and application of the metal. Apart from its superior physical properties, as, for instance, its conductivity, its extreme lightness, and its great strength, the resistance it offers to the action of what are more or less corrosive agents (moist air, acids &c.), compared with the common metals (copper, iron), coupled with its permanency of lustre, render it a most valuable material for making the articles used in the cooking and preparation of food. Even should the metal be acted upon there is no reason to believe that the salt of aluminium formed is prejudicial. The pure metal is not easily oxidised by air or water and, unlike silver, is not tarnished by sulphur compounds. Nitric and sulphuric acids scarcely affect it, but in hydrochloric acid or in solutions of the caustic alkalies it dissolves readily. Organic acids—e.g., citric, tartaric—are without action upon it, except in the presence of common salt, in which case it is slightly acted upon, whereas copper and iron under similar circumstances would dissolve in marked amount. The employment of aluminium, therefore, is calculated to offer distinct advantages from a hygienic standpoint over copper in fruit preserving, since this metal is very commonly found in preserves as a result of the action of fruit or vegetable acids upon the copper utensils. For culinary purposes, however, in our experience there is no better metal than pure tin, although it is expensive and, like iron, about three times heavier than aluminium.

WE have received from Messrs. Armour and Co., of 59, Tooley-street, a small note and card case containing the full programme of the forthcoming meeting of the British Medical Association. The information thus concisely put should prove useful to intending visitors, and Messrs. Armour and Co. will be pleased to forward one to any medical man on application.

CHARGE FOR INFECTIOUS HOSPITALS IN THE PROVINCES.

THE accommodation for infectious cases does not seem to have taken such a demoralising form in the provinces as it has in the metropolis. At Bury St. Edmunds a ratepayer was summoned for the maintenance of his daughter and niece while suffering from scarlet fever in the Sanitary Hospital. The charge was £7 10*s*. The sum does not seem excessive for two scarlet fever cases, but it was explained on the part of the defence that the patients were attended by a private practitioner whose bill was £4. The Bench made an order for the payment of £5 instead of £7 10*s*.

ERRATUM.—Mr. D. Biddle has called our attention to an obvious slip in the footnote to his letter which we printed in our last issue. "The death-rate from diphtheria alone in 1893 was higher than the death-rate from all *other* throat affections" &c. should read "The death-rate from diphtheria alone in 1893 was higher than the death-rate from all throat affections" &c.

F. T. H.—There are numerous books which will serve our correspondent's purpose, and amongst them we may mention Whitelegge's "Hygiene" (Cassell and Co.), Newsholme's "Vital Statistics" (Swan Sonnenschein and Co.), and Knight's "Annotated Bye-laws." It is also desirable that copies of the Sanitary Acts should be procured, but Whitelegge's "Hygiene" will indicate what is necessary in this direction. Although our correspondent was registered prior to January, 1890, he will probably deem it expedient to attend a course of laboratory instruction in the analysis of water, air, food, &c., and he will do well to consult his teacher as to what books he is to read; Wanklyn's "Water Analysis," or Louis Parke's "Hygiene" are largely used. As a work of reference he had better obtain Stevenson and Murphy's "Hygiene and Public Health" (J. and A. Churchill), and in order to test his knowledge from time to time some of the old examination papers will be found useful.

Skin Discolouration.—Our correspondent is advised to consult his medical man. We do not prescribe or recommend treatment.

ACTS OF KINDNESS BY SUBURBAN PRACTITIONERS.

Huddersfield.—Our correspondent is quite right in his theory. Such visits are properly announced to the family adviser and regarded as made for him. This need not prevent a friendly understanding between him and the family adviser as to such visits where any special circumstances—such as frequency, night calls, or special duties—arise. Such an understanding is often agreeable to the regular attendant. But in the absence of special circumstances our correspondent's view is certainly the right one.

DISTRICT MEDICAL OFFICERS: THEIR DUTIES, FEES &c.

D. M. O.—1. A district medical officer is only required to attend persons within his district "whenever he may be *lawfully* required to furnish attendance or medicines by a written or printed order of the guardians, or of a relieving officer of the union, or an overseer." He is also required to attend persons on a yearly list prepared by order of the guardians, who produce a ticket showing that they are on the list. The list is to be supplied to the medical officer by the guardians. 2. He is entitled to evidence. 3. The fees for fractures will not be allowed where the bone is set before the district medical officer is called in, but he should apply for some remuneration, and ought to receive it, for after-treatment. 4. We cannot refer in the way desired, but the above rules will be found in Lumley's "Manual for Poor Law Medical Officers."

Dr. Thomas F. Dewar is thanked for his letter.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Chelsea (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES AND ADDRESSES.

MONDAY.—ST. JOHN'S HOSPITAL FOR SKIN DISEASES (Leicester-sq., W.C.).—6 P.M. Dr. Morgan Dockrell: Ringworm.

During the week marked copies of the following newspapers have been received:—*Dundee Advertiser, Journal des Debats (Paris), Northern Whig, Pioneer Mail, Madras Times, South Wales Daily News, Pall Mall Magazine, Isle of Wight Mercury, Montgomery Express, Irish Times, Bradford Daily Telegraph, Daily Chronicle, Times of India, Bath Herald, Swanley District Times, Birmingham Gazette, East Anglian Daily Times, Oldham Chronicle, Nottingham Daily Express, City Press, Western Morning News, Devon and Exeter Daily Gazette, Scotsman, Barrow Herald, Manchester Guardian, Bromsgrove Messenger, Southampton Echo, Weekly Free Press and Aberdeen Herald, Leeds Mercury, West Middlesex Standard, Reading Mercury, Local Government Chronicle, Sanitary Record, Hertfordshire Mercury, Morning, Bristol Mercury, Builder, Yorkshire Post, Liverpool Daily Post, Architect, Surrey Advertiser, Elgin Courant, Fife Herald, Courrier de la Presse, Lincolnshire Chronicle, Carlisle Journal, Dewsbury Reporter, Local Government Journal, West Middlesex Advertiser, Wrexham Advertiser, Oxford Chronicle, Westminster Gazette, Kentish Express, Toronto Week, Wakefield Herald, Gravesend Standard, Pontefract Express, Mansfield Advertiser, Bedfordshire Times, The Belgian News, &c. &c.*

Communications, Letters &c. have been received from—

A.—Mr. A. H. Allen, Sheffield; Messrs. Armour and Co., London; Messrs. R. Anderson and Co., London; Messrs. Arnold and Sons, London; Aberdeen University, Secretary of; American Electro-Therapeutic Association, Secretary of; Apothecaries' Hall, Dublin, Secretary of.

B.—Dr. W. G. Bigger, London; Dr. T. W. Butcher, Blackpool; Mr. W. W. Baxter, Manningtree; Mr. W. H. Barrett, London; Mr. H. Draper Bishop, Weston-super-Mare; Mr. Buck, Worcester; Mr. J. Burnet, Edinburgh; Mrs. S. A. Bennett, London; Messrs. P. Blakiston and Co., Philadelphia; Messrs. Burroughs, Wellcome and Co., London; Messrs. Blondeau et Cie, London; British Home for Incurables, Streatham, Secretary of; Blackpool Town Borough, Clerk of; *Birmingham Daily Post*, Proprietors of; B. G., London.

C.—Dr. C. MacIver Campbell, Edinburgh; Dr. H. J. Cooper, Seaton; Dr. J. Michell Clarke, Clifton; Messrs. Crossley, Moir and Co., London; Chelsea Hospital for Women, Secretary of; Cœlebs, London.

D.—Dr. Ronald Daniel, London; Mr. R. Doyle, Waterford; Miss Helen Davis, London; Messrs. Domeier and Co., London; Devonshire Hospital and Buxton Bath Charity, Secretary of; Dewsbury Infirmary, Secretary of; D.M.O., Dulwich.

E.—Dr. G. M. Edwards, London; Messrs. Eason and Son, Dublin; Messrs. Elliott and Fry, London.

F.—Mr. A. Franklin-Townsend, London; Mrs. Firth, Walton-on-the-Hill; Fortunatus, London.

G.—Dr. John Goldsmith, Worthing; Mr. H. R. Greene, Knaphill; Gilbert Book Co., St. Louis, U.S.A., Treasurer of.

H.—Dr. T. W. Hime, Bradford; Dr. E. Houghton, London; Dr. W. A. Harrison, Strahan; Brigade-Surgeon-Lieut.-Colonel C. E. Harrison, London; Mr. Victor Horsley, London; Mr. J. A. L. Hammond, London; Mr. J. Heywood, Manchester; Mr. E. Hill, London; Mr. C. W. Harrington, Missouri, U.S.A.; Mr. J. H. Haywood, Nottingham; Mr. J. E. Holdsworth, London; Mr. T. Hill, Bristol; Mr. P. Hope, London; Miss Hooper London; Messrs. Hertz and Collingwood, London; Messrs. W. Hill and Co., Ltd., London; Halifax Infirmary, Secretary of; Home and Hospital for Jewish Incurables, Secretary of; H. 72, London; H. R. C., London; Huddersfield.

I.—International Congress of Hygiene and Demography, Secretary-General of; I. P.

J.—Sir George Johnson, London.

K.—Dr. L. Kidd, Enniskillen; Mr. T. Keadney, Clonakilty.

L.—Dr. T. M. Legge, Brighton; Dr. Lagoudaky, Paris; Mr. Thomas Laffan, Cashel; Mr. H. Littlewood, Leeds; Mr. B. C. Lamb, Tillamook, Ore., U.S.A.; Mr. J. Lawrence-Hamilton, Brighton; Liverpool Hahnemann Hospital, Secretary of; London County Council, Clerk of; Longford Iron Wire and Steel Co., Director of; Lupus, London; Lux.

M.—Dr. W. Y. Martin, Walkden; Dr. J. Millar, Nottingham; Dr. J. McConaghey, Allahabad; Dr. R. H. Milson, London; Dr. E. May, St. Margarets; Mr. J. Milne, London; Mr. R. T. Morgan, Clevedon; Mr. W. F. Mason, Manchester; Mr. R. Mosse, London; Messrs. Margrave Bros., Llanelly; Messrs. Mayer and Meltzer, London; Messrs. W. F. Mason, Limited, Manchester; Medical Society of Melbourne, Victoria, Hon. Secretary of; Medical Examiner, New York; Maltine Manufacturing Co., London; M., London; Moelwyn, London; M. O. H., London.

N.—Mr. J. E. Newport, Bristol; Norfolk and Norwich Hospital, Secretary of; National Health Society, Secretary of.

O.—Mr. H. B. Osburn, Bagshot; Messrs. Oppenheimer, Son and Co., London.

P.—Dr. H. W. Phillips, East Croydon; Mr. A. Palmer, Loughborough; Mr. E. J. Plummer, Exeter; Mr. C. J. Parker, London.

R.—Sir B. W. Richardson, London; Dr. T. D. Reed, Montreal; Dr. W. Rutherford, Edinburgh; Mr. F. J. Rawlinson, Bangor; Verlag von Robinski and Co., Berlin; Messrs. J. Richardson and Co., Leicester; Messrs. A. Riddle & Co., London; Royston Cottage Hospital, Secretary of; Retina, London; Ruck, Pickering, U.S.A.

S.—Dr. A. E. Spohn, Texas; Dr. O. M. Skerritt, Clifton; Dr. J. H. Simpson, Rugby; Dr. F. J. W. Silk, London; Mr. W. Woods Smyth, Maidstone; Mr. H. Havelock Sturge, Eltham; Surg.-Capt. R. R. Sleman, London; Messrs. Street Bros., London; Sanitas Co., Ltd., London; Messrs. F. Stearns and Co., London; Stockport Infirmary, Assistant Secretary of; Subscriber.

T.—Dr. W. B. Tonson, Luton; Dr. J. C. Thresh, Chelmsford.

U.—Mr. J. R. Upton, London; University of London, Registrar of.

V.—Mr. E. B. Vizer, Brighton.

W.—Dr. T. Stacey Wilson, Birmingham; Dr. Dawson Williams, London; Dr. A. Wilsden, Wooler; Dr. A. J. Wall, Paris; Dr. W. Atkinson Wood, Melbourne; Dr. R. L. Wood, Newbridge; Mr. J. Wright, London; Mr. Rivers Willson, Oxford; Mr. Whittingham, Bolton; Mr. C. Hamilton Whiteford, Coventry; Mr. A. H. Ward, London; Messrs. Wilcox and Co., London; Messrs. J. Wright and Co., Bristol; W. G., London.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. W. C. Arnison, Newcastle-on-Tyne; Mr. J. W. Arrowsmith, Bristol; Messrs. S. Adams and Sons, Nottingham; Æsculapius, Llanfairfechan; A. and B., London; A. H. D., London; Assistant, London; Alpha, London; A. London.

B.—Dr. J. T. Balmford, Salford; Dr. M. Beattie, Gotham; Mr. J. H. Busteed, London; Mr. E. E. Bray, London; Mr. Bennett, London; Messrs. Battley and Watts, London; Messrs. Blackie and Son, London; Basford Union, Clerk of; Bootle Borough Hospital, Clerk of.

C.—Dr. H. O. Corfield, Desford; Dr. Cooper, Southport; Mr. J. Chatham, Edinburgh; College of Preceptors, London, Secretary of; Cheltenham General Hospital, Secretary of; Confidential, London; Challinors, Hanley; C. H., London.

D.—Dr. J. Duncan, Carlisle; Dr. P. J. Daly, Cork; Mr. A. Denman, Beaconsfield; Derby County Asylum, Mickleover, Clerk of; Duty First, London; D. P. Q., London.

E.—Dr. A. F. Elliot, Bodmin; Mr. B. Edwards, Birmingham; Mr. E. Eddington, Thornbury.

F.—Dr. W. E. St. L. Finney, Norbiton; Dr. D. Fennell, London; Mr. W. J. Fox, Clay Cross; Mr. C. D. Fenn, Diss; Mr. W. A. Frost, London; Flower House, Catford, Secretary of; Fisherton Asylum, Salisbury, Medical Superintendent of; F.R.C.P.E., London; Forceps, London.

G.—Mr. W. F. Gardener, London; Mr. J. Gibson, Hebden Bridge; Gresham Life Assurance Society, London, Secretary of; G. M., London; George St. 6, Manchester-square; G. W., London.

H.—Dr. Henderson, Rostrevor; Dr. J. B. Hellier, Leeds; Mr. G. Hawkings, Plymouth; Mr. A. Hawkyard, Leeds; Mr. W. W. Hoare, Windsor; Mr. T. Humphrey, Manchester; Hospital for Women, Soho-square, Secretary of; Hortus, London; Holly, Eastbourne.

I.—Iota, London.

J.—Dr. R. W. Jamie, Colville; Mr. F. B. Jessett, London; Mr. Y. M. Jones-Humphreys, Cemmaes.

K.—Messrs. W. and J. Kennedy, Harwich; Knighton Union, Clerk of.

L.—Mr. C. Lucas, Burwell; Mr. Loddon, Reading; Messrs. Lumley and Co., London; Leeds General Infirmary, Secretary of; L.R.C.P., Edinburgh.

M.—Dr. R. D. Mothersole, Birkenhead; Dr. J. C. Maxwell, Bridgwater; Dr. M. Mackay, Priors Marston; Mr. G. J. Morgan, Kinnerley; Mr. H. Malley, Dublin; Mr. E. Menier, London; Mr. J. B. Monks, Blackburn; Messrs. J. Maclehose and Sons, Glasgow; Medicus, Islip; Medicus, Leeds; M.B., London; M.O.H., London; Medicus, Bristol; M. R. C. S., Middlesbrough; Medicus, Exeter; Meridies, London; Mawson, Manchester; Medicus, London; M., Torquay; M.O.H., Leeds; M.R.C.S., London.

N.—Dr. J. H. Nicoll, Glasgow; Newcastle-on-Tyne Hospital for Sick Children, Secretary of; Navigation, London.

P.—Dr. H. W. Pomfret, Manchester; Dr. Price, Upwell; Mr. A. W. Pierce, Liverpool; Mr. F. Piggott, Cambridge; Messrs. Paige and Grylls, Redruth; Pro Tempore, London; Priam, London.

Q.—Q. E. D., London.

R.—Mr. W. Rae, Northampton; Mr. R. Rickards, Darenth; Mr. E. W. St. V. Ryan, Cork; Mr. W. Ruck, Pickering; Royal South Hants Infirmary, Southampton, Secretary of; Reflector, London; Ready Money, London.

S.—Dr. W. H. Smith, Meriden; Mr. T. F. H. Smith, Farningham; Mr. J. P. Smith, Lowestoft; Messrs. Schweitzer and Co., London; Messrs. Sumner and Co., Liverpool; St. Luke's Hospital, London, Secretary of; Stoke-on-Trent Parish, Clerk of; Springfield House Asylum, Bedford, Secretary of; Spes, London.

T.—Dr. C. B. Taylor, Nottingham; Mr. Lawson Tait, Birmingham; Mr. A. J. Tansgrove, Kidsgrove; Mr. J. Thin, Edinburgh; Mr. W. Thwaites, Bristol; Thornhill, London.

W.—Dr. C. T. Williams, London; Dr. R. Woodman, Gt. Yarmouth; Mr. W. W. Williams, St. Davids; Messrs. Druce and Co., London; Messrs. R. R. Whitehead and Bros., London; West-end Nursing Institution, Medical Superintendent of; W., Brighton; W. X., London; West, London.

X.—X. Y. Z., London; X., London.

Y.—York.

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